

JPRS 84832

28 November 1983

# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2478

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CEMA TRADE AND INDUSTRY FIGURES

Growth of Chemical Industry

East Berlin AUSSENWIRTSCHAFT in German No 43, 19 Oct 83 pp 27-28

[Unsigned Article]

[Text] The annual growth in production of chemical products in the CEMA countries from 1976 to 1980 has been at high levels. The output of products such as plastic materials, synthetic resins, chemical fibers, and products of organic synthesis has increased the most. The rapid expansion of the chemical industry has led to a growth in its share of the total volume of industrial production. The successes of the chemical industry were made possible through highly rewarding capital expenditures and large outlays for scientific research. The share held by capital expenditures for chemical projects exceeded 10 percent of the total industrial capital expenditures in many CEMA countries. The share held by outlays for machinery and equipment rose at the expense of those for construction and assembly work. A considerable portion of resources was directed toward industrial re-equipping, modernization, and the reorganization of existing chemical enterprises.

The production of ammonia, sulfuric acid, calcined and caustic soda, chlorine, and calcium carbide has been stimulated by the increasing production of fertilizers and products of organic synthesis, whose preparation requires the use of the above substances. The development of the chemical industry and the introduction of the most recent achievements of science and technology are closely linked with the advances in specialization and cooperation in production on the part of the CEMA countries within the framework of the SOeI [Socialist Economic Integration].

Results of the SOeI

The period analyzed (1976 to 1980) was characterized by advances in the socialist economic integration of the CEMA countries in the sector of the chemical industry. In accordance with the comprehensive program, the CEMA countries concluded a series of bilateral and multilateral agreements on specialization and cooperation for the production of chemical products and on scientific-technical cooperation. Within the framework of the Standing

Commission of the CECA, through scientific-technical cooperation in the sector of the chemical industry some 90 to 110 research subjects are being coordinated each year. More than 200 scientific research, construction, and planning organizations of the CECA countries have taken part in the preparing of these research topics between 1976 and 1980. From 1970 to 1981 the reciprocal deliveries of chemical products between CECA countries grew to 3.6 times its former level. In 1981 about 34 percent of these deliveries consisted of goods whose exportation was stipulated on the basis of specialization agreements.

Table 1: Indicators of the Chemical Industry in CECA Countries

Country	I	II	III		
	1976 to 1980 in %	1975	1981	1975	1981
Mongolian People's Republic	11.1	3.5	3.8	0.5	2.1
People's Republic of Bulgaria	9.7	7.6	8.3	13.2	11.0
Socialist Republic of Romania	9.6	11.7	10.1	15.1	14.8
Hungarian People's Republic	7.8	10.8	13.4	14.2	9.0
CSSR	5.8	8.1	8.5	9.5	7.1
USSR	5.6	7.4	7.8	10.0	8.1
GDR	4.9	11.8	11.3	11.8	11.3
Polish People's Republic	4.3	9.1	8.9	9.6	9.8
Cuba	1.0	10.3		8.5	

I = average annual growth, II = share in total industrial production, III = share in capital expenditures for industry as a whole

An example of the influence of these integration processes on the chemical industry is given by the growth in production of calcined soda in the People's Republic of Bulgaria in connection with the putting into operation of a plant in Devnja, which was built with Soviet and Hungarian participation. Considerable successes have been achieved by the socialist countries in the development of their fertilizer industry. In 1981, 32 percent of the corresponding world production was generated in the CECA countries; the USSR took first place here. The share held by highly concentrated fertilizers in total fertilizer output increased the most, with these including mixed-base fertilizers which contain several active components as well as fertilizers with trace elements. The development of plant-protective agents was effected by way of an expanding of the range of products, an improvement in quality, and a diversification in types of goods and application methods. An important role was played in this by the fulfillment of the agreements on specialization and cooperation in production by the member countries of Interchim.

The output of products of organic synthesis was oriented primarily toward petrochemical raw materials. The progress of the petrochemical industry had a decisive influence on the increase in the production of polymers.

In the CEMA countries, from 1975 to 1981 the production of plastic materials and synthetic resins increased to between 1.5 and 2 times former levels. In 1981, almost 50 percent of the total CEMA production of plastic materials consisted of polyethylene, PVC [polyvinyl chloride], and polystyrene. A rapid development was also seen in the output of chemical fibers, especially synthetic fibers, whose share reached 50 to 70 percent of total production. The variety of fibers available expanded because of the production of modified reclaimed fibers, which have the properties of natural, textured, and synthetic fibers with a large surface area.

Table 2: Production of Selected Chemical Products

<u>Country</u>	<u>1975</u> <u>in 1,000 tons</u>	<u>1981</u>
<u>Ammonia</u>		
USSR	11,998	17,894
Romania	1,895	2,897
Poland	2,075	1,684
GDR	1,117	1,463
Bulgaria	935	1,023
Hungary	624	996
CSSR	863	865
Cuba	118	203
<u>Sulfuric acid</u>		
USSR	18,645	24,095
Poland	3,413	2,776
Romania	1,448	1,814
CSSR	1,245	1,317
GDR	1,002	948
Bulgaria	854	920
Hungary	647	596
Cuba	416	420
<u>Fertilizers</u> (in 100-% nutrient)		
USSR	21,998	25,998
GDR	3,984	4,787
Romania	1,729	2,640
Poland	2,581	2,242
Cuba (in net weight)	987	1,532
CSSR	1,059	1,139
Hungary	704	1,112
Bulgaria	626	710
<u>Methanol</u>		
USSR	1,447	2,030
GDR	240	243
Romania	106	243
Poland	149	185
CSSR	93	115
Bulgaria	28	28

[table continued on following page]

<u>Country</u>	1975 <u>in 1,000 tons</u>	1981 <u>                    </u>
<u>Plastic materials and synthetic resins</u>		
USSR	2,390	3,404
GDR	605	998
CSSR	428	913
Romania	347	584
Poland	431	502
Hungary	124	312
Bulgaria	156	310
Cuba	-	-
<u>Chemical fibers</u>		
USSR	955	1,213
GDR	282	303
Poland	220	205
CSSR	140	169
Romania	119	145
Bulgaria	63	101
Hungary	20	29
Cuba	6	5
<u>Synthetic dyes</u>		
USSR	89	82
Bulgaria	24	21
Romania	12 <sup>1</sup>	16 <sup>1</sup>
CSSR	11	14
GDR	10	11
Bulgaria	2	2
Hungary	0	-

<sup>1</sup> organic dyes

The product-mix structure for paints and varnishes changed because of an increase in the proportion of modern types of varnishes and enamels based on polycondensation and polymerization resins and on water-emulsion paints and epoxy and polyester pigments. In this sector, the volume of reciprocal deliveries of synthetic dyes and chemical auxiliary materials for light industry among the member countries of Interchim doubled from 1970 to 1980. In the production of chemicals for household and commercial purposes, of major importance was the agreement on scientific-technical cooperation which was signed in 1973 by the CEMA countries.

#### Trends and Projects for 1981/85

The coordinating being done on a bilateral and multilateral basis with respect to plans for the development of the chemical industry of the CEMA countries from 1981 to 1985 has expedited the selecting of the most urgent problems involved in the realization of the comprehensive program and long-range target programs of cooperation. In the plans for the social and economic

development of the CEMA countries, a substantial increase in the production of chemical products is provided for, such as in the People's Republic of Bulgaria by 43 percent, in the USSR by 30 to 33 percent, in the Socialist Republic of Romania by about 10 percent, and in the Hungarian People's Republic and the GDR by 6 percent each.

In accordance with the specialization taking place in the separate CEMA countries, those chemical productions are being developed the most rapidly which meet the needs of a number of different CEMA countries. In the People's Republic of Bulgaria, the production of plant-protective agents and pharmaceuticals and the processing of plastic materials is being given great attention. In the Socialist Republic of Romania, the production of polymeric materials will climb to 1.6 to 1.8 times its current levels, and that of dyes and medicines will increase more than threefold. The output of pharmaceutical preparations in the CSSR will increase by 37 percent. In 1985 the USSR intends to produce about 36 million to 37 million tons of fertilizers (in 100-percent nutrient), 6 million to 6.25 million tons of plastic materials and synthetic resins, and 1.6 million tons of chemical fibers and yarns. The primary direction to be taken in the development of the chemical industry of the GDR from 1981 to 1985 is the introduction of highly productive methods for the processing of raw materials and an accelerated increase in the production of small-tonnage chemical products and goods for the needs of the general public.

The current period up to 1985 is characterized by a search for new solutions for raising the technical level and the efficiency of production, the quality of the products, the comprehensive utilization of raw materials, and for the conservation of energy, material, and manpower. The successful fulfillment of these tasks is aided by the advantages inherent in the socialist economy as well as by the possibilities offered by specialization and cooperation within the framework of international socialist economic integration.

Descriptors: CEMA countries; chemical industry; production; socialist integration; cooperation; 1981; 1985.

#### Foreign Trade 1982, Trends 1983

East Berlin AUSSENWIRTSCHAFT in German No 44, 26 Oct 83 pp 1-2

[Unsigned Article]

[Text] As in past years, in 1982 as well the foreign trade of the CEMA countries developed at a higher pace than the national incomes and industrial production. Its turnover reached a total of about 267 billion rubles. Thus it was greater than in 1981 by 6.6 percent. The tempo of development of exports considerably exceeded that of imports, with a growth of 10 percent (imports--3.2 percent). As a whole, exports amounted to 138.5 billion rubles and imports to 128.6 billion rubles.



Table 1: International Structure of the Foreign Trade of the CEMA Countries

Country group	1982 in billions of rubles	Share in %	1982; 1981
Socialist countries including	160.9	60.3	111.4
CEMA countries	149.2	55.9	111.5
other socialist countries	11.7	4.4	109.4
Developing countries	31.8	11.9	101.3
Capitalist industrial countries	74.3	27.8	99.7

CEMA Information Bulletin 8/83, p 44

Table 2: Structure of Goods Exported From CEMA Countries

Type of goods	1981 in %	1982
Machinery, equipment, and means of transportation	28.4	29.3
Fuels, mineral raw materials, metals	36.8	38.5
Raw materials, semi-finished products, and foodstuffs	13.7	10.4
Industrial consumer goods	8.5	8.6
Other products	12.6	13.2

IRI 106 (5527) of 8 September 1983

#### Intensive Development of Mutual Trade

The mutual trade of the CEMA countries developed twice as rapidly as foreign trade as a whole, with its share in total goods turnover having risen to 15.9 percent. In an increase by 11.5 percent, the separate countries enlarged their exchange of goods with their CEMA partners in 1982 in comparison to 1981 as follows:

Bulgaria	• 13.4 percent
Hungary	• 10.0 percent
DDR	• 8.5 percent
Cuba	• 22 percent
Mongolia	• 15 percent
Ireland	• 11.1 percent
USSR	• 12.5 percent
CSSR	• 13.8 percent

The goods turnover of Romania with its CEMA partners decreased by 6.9 percent compared to 1981.

In mutual trade, the CEMA countries are meeting a significant portion of their import needs for machinery, equipment, fuels, raw materials, and



other important products. At present, the shares held by reciprocal deliveries in total imports of the CEMA countries amount to the following:

- Machinery and equipment--67.8 percent,
- Hard coal--99.2 percent,
- Petroleum--69 percent,
- Natural gas--93 percent,
- Iron ore--76.7 percent,
- Ferro-metal rolling stock--66.3 percent,
- Lumber--97.8 percent,
- Industrial consumer goods--60.7 percent.

Table 1: Share Held by Trade with Other CEMA Countries in the Foreign-trade Turnover

Country	1980 in %	1981 —	—
People's Republic of Bulgaria	72.8	70.6	73.5
Hungarian People's Republic	49.6	51.3	51.7
GDR	62.7	63.4	63.1
Republic of Cuba	--	--	81.5
Mongolian People's Republic	96.7	97.1	96.9
Polish People's Republic	53.3	59.7	54.4
Socialist Republic of Romania	34.6	38.7	43.7
USSR	48.6	47.6	49.1
CSSR	65.5	67.1	70.0

Statistical Yearbook of the CEMA Member Countries, 1981, 1982; Information Bulletin of the CEMA, 8/81.

In comparison to the previous years, the pace of growth for the reciprocal deliveries of machinery and equipment increased. Their volume expanded from 24.8 billion rubles in 1981 to 27 billion rubles in 1982 and their growth compared to the respective previous years increased from 3.9 percent to 8.8 percent. The following countries, among others, increased their exports of machinery and equipment to the other CEMA countries as follows:

Bulgaria by 11.6 percent,  
Hungary by 10.5 percent,  
the GDR by 11.1 percent,  
Poland by 15.6 percent,  
Romania by 16.6 percent,  
the CSSR by 11.6 percent.

Despite the significant absolute increase, the tempo of development of reciprocal machinery deliveries still lagged behind the rate of growth of the mutual trade. Consequently the share held by machinery and equipment in exports to CEMA countries dropped from 41.2 percent in 1980 to 39.5 percent in 1982.

The high degree of self-supplying with fuel and raw materials on the part of the CEMA countries is of great importance for the dynamic and strong growth of the national economies and for the diminishing of the negative effects on their development from the capitalist crisis. In line with the

corresponding long-range target program of cooperation, the growing needs of many CEMA countries for sources of energy and raw materials is being met to a high degree by mutual trade. The USSR is playing a leading role in this. Thus, for example, Bulgaria is meeting 80 percent, Hungary 90 percent, and the GDR and CSSR 95 percent of their needs for petroleum and petroleum products through purchases from the USSR. The situation is similar with ores, cotton, and lumber. On the other hand, these countries are supplying ferro-metal rolling stock, caustic and calcined soda, chemical products, and other finished goods and raw materials to the USSR.

On the basis of the corresponding long-range target program, the mutual exchange of industrial consumer goods is developing at a fast pace. The exporting of these to other CEMA countries increased by 15.8 percent in 1982 in comparison to 1981 (1981: + 11 percent) (see also AUSSENWIRTSCHAFT 31 of 27 July 1983, pp 1-2).

In 1982 the CEMA countries continued to realize jointly planned measures for the development and improvement of specialization and cooperation in production. The exporting of specialized products rose in 1982 by 14.7 percent compared to 1981, to 13.4 billion rubles. Within the framework of reciprocal trade, the share held by these products in exports reached 17.7 percent, including the following shares in exports:

Bulgaria--33.3 percent,  
Hungary--29 percent,  
GDR--34.7 percent,  
Poland--18 percent,  
Romania--28 percent,  
USSR--6.2 percent,  
CSSR--24.4 percent.

In 1982 the main share in this trade with specialized products was held by machine building, at 81.6 percent. In comparison to 1981, the reciprocal deliveries of specialized machine-building products increased by 1.2 billion rubles or 17.7 percent to 10.9 billion rubles. The exports of these increased considerably more rapidly than those of machine-building products as a whole, with their share in exports of machinery coming to 38 percent. Moreover, the reciprocal deliveries also increased for such specialized products as synthetic rubber, chemical and biochemical fodder additives, pharmaceutical products, plant-protective agents, and other small-tonnage chemical products.

The chief partner in the reciprocal trade of the CEMA countries is the USSR. In 1982 its share in the foreign trade of Bulgaria with CEMA countries was 73.5 percent, in that of Hungary 61.3 percent, of the GDR 60.3 percent, of Cuba 82.2 percent, of Poland 62.4 percent, of Romania 49 percent, and of the CSSR 61 percent.

On the basis of numerous agreements, including those on specialization and cooperation in production, there has been a successful development of

CEMA's trade and economic relations with the Socialist Federative Republic of Yugoslavia, which is the recipient of the main portion of CEMA's trade with socialist countries which are not members of CEMA. The goods turnover expanded in comparison to 1981 by 5.7 percent, to 8.7 billion rubles.

#### Varying Development of Trade With Non-socialist Countries

Trade with developing countries is found to be strong and continuously increasing. On the other hand, in 1982 the goods turnover with capitalist industrial countries stagnated, mainly because of the discriminatory, embargoing, and boycotting policy against the socialist countries. Nevertheless, certain CEMA countries were able to increase their goods turnover with this group of states, such as the USSR by 6.7 percent, the GDR by 6.1 percent, and the Hungarian People's Republic by 2.9 percent. Foreign-trade relations with Finland continue to develop positively. The turnover expanded by 10.2 percent, to 6.2 billion rubles.

#### Foreign Trade in 1983

In their national economic plans for 1983, the CEMA countries have incorporated the goal of further increasing foreign trade, with the intensive development of foreign-trade relations with CEMA partners having been given a special importance. The results of the first 6 months of 1983 are in line with this orientation. Thus, the USSR expanded its foreign-trade turnover vis-a-vis the first 6 months of 1982 by 6.8 percent. Here the exchanges with CEMA countries increased the most--by 11.7 percent. Also its trade with developing countries increased more than average (+ 10.1 percent). On the other hand, the turnover with the capitalist industrial countries stagnated. In the same period the GDR increased its goods turnover with the socialist countries and the USSR by 9 percent in each case. A rapid growth was noted in trade with developing countries (+ 25 percent), and the turnover with capitalist countries increased also. The foreign trade of the CSSR exceeded the planned increase. Its growth was 8 percent (exports: 7.4 percent, imports: 8.8 percent), with the exporting and importing plan with respect to the socialist countries having been more than fulfilled. Its goods exchange with these countries expanded by 11.3 percent (exports: 9.6 percent, imports: 13.5 percent), with exchanges with the USSR increasing by 13.4 percent. Thus the socialist countries had a share of 77.6 percent in its foreign trade. In its trade with non-socialist states, exports increased by 1.3 percent, while imports declined by 7.1 percent. The Hungarian People's Republic increased its exports by 19.4 percent and its imports by 12.4 percent. The foreign-trade turnover of the People's Republic of Bulgaria increased by 11 percent. The Polish People's Republic increased its exports by 16.9 percent, with deliveries to socialist countries increasing by 22.3 percent, to developing countries by 7.6 percent, and to capitalist industrial countries by 12.4 percent. The corresponding imports increased by 18 (17.1; 59.1; 10.3) percent. (Compiled on the basis of CEMA Information Bulletin 8/83 and press publications from the separate countries).

## INTERNATIONAL AFFAIRS

### PLANS FOR INCREASED ROMANIAN YUGOSLAV COOPERATION

Bucharest ROMANIA LIBERA in Romanian 27 Sep 83 p 6

[Interview with Jovan Dejanovici, president of the Federal Conference of the Yugoslav Workers' Socialist Union, on the occasion of his visit to Romania, date and place not specified]

[Text] [Question] Well then, esteemed comrade Jovan Dejanovici, a new exchange of views has taken place in the comprehensive framework of Romanian-Yugoslav relations, thanks to your meetings and conversations in Romania. What do you consider the most significant of these contacts from this visit?

[Answer] The Federal Conference of the Yugoslav Workers' Socialist Union [USPMI] happily accepted the invitation which the National Council of the Romanian Democratic and Socialist Union Front [FDUS] extended to it to visit your country. This was, in fact, in part, an expression of the general Romanian-Yugoslav rapport, of the relations between those two bodies. The program which we had, made it possible for us, in that very short timeframe, to get to know the concerns of your country, the Romanian realities.

Of course, one of the most important moments of the visit to Romania was when we were received by president Nicolae Ceausescu and the conversation that took place on that occasion. We had the opportunity for a broad exchange of opinion about the socialist construction of the two countries, bilateral cooperation, our social-political organizations and the current international scene.

[Question] Have you had any other occasions over the years to make direct contact with our country's leadership?

[Answer] I had the pleasure and satisfaction 16 years ago of meeting in Novy Sad with comrade Nicolae Ceausescu, who was the guest of president Josip Broz Tito. The two leaders were then visiting Novy Sad. As president of the Workers' Socialist Union I met them in the modest role of host. The reception of our delegation now has given me firsthand knowledge of the opinions of Romania's president and provided ample review of problems of mutual interest. All in all, with regard to the subjects discussed you could say that the positions of Yugoslavia and Romania are very close, in some cases even identical. Comrade Nicolae Ceausescu was particularly lucid in describing the options that characterize our relationship, the interview served as a fruitful dialogue on bilateral collaboration and the international situation.



[Question] Could you say something now on the primary topic--cooperation between Romania and Yugoslavia?

[Answer] I have noted that, in your country as in ours, the principal concern of social-political bodies is the new realities on the road to continued development, the overcoming of economic difficulties, of problems connected with the world economic crisis and negative phenomena in the world market. This is true, first and foremost, with the gravest consequences, in underdeveloped countries. Since collaboration is a major source of progress, we reached the common conclusion that we must make increased efforts toward new steps forward on the road to expanding and diversifying Romanian-Yugoslav collaboration.

[Question] You feel then that new possibilities of this sort exist or can be developed?

[Answer] Yes. They exist. There are some very old ones which have already been developed, which have been tried, but which I would say have not been sufficiently successful. But we can also identify new possibilities, particularly in the domain of industrial cooperation and in agriculture, where there has been accumulated experience in scientific research activity. Keeping in mind the "strategic" importance of food production, we feel that the rich experience of both our countries could be put to better use, to our mutual benefit. Afterwards I visited the "August 23" plant and saw that it is a particularly developed economic complex which has attained very good results in all of its activities and which is well-endowed. I saw on the occasion of the visit that we have prospects for bilateral cooperation. It is one of the Romanian economic facilities which has built, in Yugoslavia, too, a series of installations for construction of Diesel electric locomotives. We appreciate that there is a lot of room for cooperation between this facility and some of those in Yugoslavia, such as a large complex in Zagreb which has a similar profile. Surely it is one element of bilateral cooperation, and there are other possibilities and other fields of activity through which Romanian-Yugoslav ties can develop and strengthen. The experience of the Gates of Iron I is an eloquent example of this sort. The experience of Gates of Iron II is a new step in our cooperation, for the perfection of which we need to make increased efforts. We can do it.

[Question] As to the second most important topic--the current international scene--what opinions can you share with us?

[Answer] In the conversation we brought up the problem of existing points of tension. We discussed new pressures which are developing. Both sides appreciate that the situation in the Middle East continues to be serious, and that this is one of the most dangerous crises threatening peace in the region and in the entire world. At the same time, we understand that there are also other points of tension, including South Africa, the situation in Chad, in Latin America and some areas of Asia. As we said, all of these threaten peace. Yugoslavia, a non-aligned country, believes that it must carry on the struggle

everywhere to reduce foreign influence and involvement in the affairs of other peoples so that each nation can freely and independently decide its own destiny.

[Question] The traditional dialogue between the Romanian and Yugoslav state and party leaders--and this dialogue really has become traditional--displayed an element which I understand resurfaced in the conversations during your visit. To wit, many common points of view were expressed, some of which were those things you have mentioned?

[Answer] Certainly. And in this context I would add the question of the Balkans and the situation of the Mediterranean Sea. It is in the mutual interest of Yugoslavia and Romania for the Balkans to be transformed into a denuclearized zone and for the problems of the Mediterranean to be solved in an equitable fashion. I feel that in this direction both the FDUS and the USPMI can, through their international activities, make a significant contribution to the general efforts of the two countries.

[Question] Also in the sphere of the appeal for disarmament and peace, launched by the FDUS at the very time you were in Bucharest?

[Answer] Any initiative which moves to strengthen peace or to realize disarmament is undoubtedly extremely positive.

[Question] Then you are of the opinion that the problem of disarmament is today--as testimony from the entire world seems to emphasize--a global priority.

[Answer] Without a doubt. Thus you see that the Geneva Committee for disarmament has not had much success. This means that we have not yet reached the necessary degree of understanding, and there is not yet sufficient preparation for it to act concretely to solve these burning problems of humanity. Therefore disarmament must become the concern of all the world's people.

[Question] I have another question, or rather a request: that you describe for our newspaper the essential objectives that your organization is now pursuing.

[Answer] I would say that the USPMI is acting in two basic directions now. The first is the primary concern of all the social forces of our country: the achievement of economic stability in Yugoslavia. World events, international economic relationships and some internal weaknesses have contributed to making our primary goal the mobilization of all forces for the solution of our difficulties and for creating the necessary conditions for a decisive path forward on the road to development and progress. In this connection we have worked out a program that we are following and on which all forces must be concentrated. Industrial production is already showing new life. We have raised our exports by 16 percent on the foreign exchange market. We expect that in the last trimester of this year, as in the coming year, we will continue to show good results. Permanent development of our society

presupposes and demands significant changes in people's consciousness and behavior. Hence, we need to devote greater efforts to raising the productivity of the workforce in order to increase our participation on the world market, and progress in all domains.

[Question] And the second concern?

[Answer] It is directly connected to the first and is devoted to the continuous development of the socialist system of self-administration. It has been noted that some institutions, some economic facilities are no longer receptive to new ideas, new forms of action. Therefore we have worked out a program to deal with this which we are now putting into practice. We feel that all these problems and all the results which we can obtain must become the proper concern of all our social forces, of all our workers, of our entire society.

[Question] In conclusion, let us get together again in a bilateral framework. Are you satisfied with the results of this visit?

[Answer] I am very satisfied. Many of the things that I have encountered on the way have truly enriched my consciousness, my experience. Thus the most important thing that I have found is the common language that unites us in many concerns and creates a tight bond between us.

9794

CSO: 2700/22



GERMAN DEMOCRATIC REPUBLIC

FINANCIAL STATEMENT FOR 1982 SHOWS INCOME SURPLUS

East Berlin NEUES DEUTSCHLAND in German, 28 Oct 83 p 3

[Unsigned article: "Budget for the Year 1982"]

[Text] Thanks to the outstanding achievements of the workers class, the co-operative farmers, the intelligentsia and all working people in the struggle for the all-round fulfilment and targeted overfulfilment of the 1982 National Economic Plan and in implementation of the 10th SED Congress resolutions, fine results were achieved in the fulfilment of the 1982 State Budget Plan.

In implementation of the law issued by the People's Chamber of the GDR on the 1982 State Budget Plan, revenue was produced at the amount of M 182.8 billion. The plan was fulfilled by 102.8 percent. This made possible expenditures at the amount of M 182.1 billion.

In the outcome of more efficient economic management, revenue exceeded expenditures on the State Budget Plan by M 765 million. The law on the 1982 State Budget Plan had envisaged a surplus of M 75 million. The budgets of towns and communities, kreises and bezirks likewise showed income surplus.

A decisive share in this stable development of the national finances of the GDR lay with the state-owned combines and enterprises the net income of which in 1982 brought in more than 75 percent of the state budget's total revenue.

Increased economic efficiency in all economic sectors made possible securing and gradually improving also in 1982 the material and cultural standard of living the people has attained. The state budget allocated considerable financial means to carrying on the housing construction program, holding prices stable for basic commodities and for tariffs and rentals, to the educational system and the health, social welfare and cultural care for the population.

Furthermore, M 4.2 billion were spent in 1982 from the cultural and social welfare funds of the enterprises for the cultural and social care of the working people and their children and for the veterans of labor.

Funds planned for national defense in 1982 were allocated from the state budget according to plan and used for measures for the protection of socialism and peace.

I. Revenue	in million Marks
Total Revenue	182,836.0
Important Revenue:	
--Revenue from State-Owned Combines and Enterprises	
Production Fund and Trade Fund Income	21,532.5
Net Profit	53,592.0
Commodity-Related Income	38,444.8
--Income from Banks	7,414.5
--Income from Agricultural Enterprises	1,113.9
--Income from State Facilities of Agriculture, especially from State Veterinarian Activities	437.4
--Income from Soil Utilization Fees	187.6
--Income from Water Use Dues and Other Income from Water Managements	398.7
--Income from	
Craft Production Cooperatives and Other Socialist Cooperatives	3,711.6
Private Craftsmen and Tradesmen	3,609.7
--Income from the Wage Tax of Workers and Employees	7,599.2
--Income from the Research of the Academy of Sciences and the Colleges	552.6
--Rental Income from the Communal Housing Administrations in the Communities	261.6
--Income from State Educational Institutions, especially for Food and Housing and Membership Dues of which in the areas of	714.2
Public Education	383.4
Universities and Technical Schools	284.9
Adult Education	35.8
Vocational Training	10.1
--Income from State Health Institutions	7,392.0
of which	
National Insurance Payments on Health Care	5,979.6
Income from Pharmacies and Orthopedics Workshops	875.2
Other Income such as from Laundries, Parents' Dues to Nurseries and Contributions to Old-Age and Foster Homes	537.2
--Income from National Insurance	16,119.9
of which	
from the Contribution Portion of the Enterprises, State Organs and Institutions, Cooperatives	9,123.9
Working People's Contributions	6,996.0
--Income from State Institutions of Culture, Recreation, Sports and Youth Facilities	846.6
of which in	
Culture	484.7
Recreation and Sports	199.3
Youth Facilities	162.6
--Radio	115.4
--Television	412.7
--Local Government Measures and Services	129.5
--State Administration and Economic Bodies	302.4
--Community Taxes	525.3

II. Expenditure	<u>in million Marks</u>
Total Expenditure	182,071.4
Important Expenditures:	
--Budgetary Funds for Science and Technology and for Research Institutions	2,755.5
of which for	
Science and Technology in the Enterprises and Combines of the State-Owned Economy	1,236.1
Science and Technology in Agriculture and Forestry	369.4
R&D in the Academy of Sciences	569.6
R&D in the Universities, Colleges and Technical Schools	438.2
R&D in Research Institutions of State Organs	142.2
--Budgetary Funds for Social Science Research in Academies and Colleges	174.3
--Budgetary Funds for Investment Financing	8,147.4
--Road Maintenance and Repair	3,128.0
particularly for	
Roads	1,304.6
Railroad Lines	1,628.1
Sea and Inland Harbors and Waterways	156.0
--Product-Related Subsidies for Raw and Basic Materials	5,524.6
--Price Subsidies for Industrial Enterprises for Temporarily Stabilizing the Effects of Planned Changes of Industrial Prices while Ensuring Economic Cost Accounting	1,678.9
--Expenditures on Amelioration, Investment Subsidies, Product-Related Price Subsidies and Other Production-Enhancing Measures in Agriculture	2,669.1
--Product-Related Price Subsidies for Means of Production for Agricultural Enterprises	6,909.8
--Expenditures for the Veterinary System, Crop Protection, Special Schools, Exhibits and Other Measures in Agriculture and Forestry	951.3
--Expenditures for Recultivation Measures	11.2
--Water Management Expenditures	657.6
--State Budget Allocations for Housing	8,785.4
of which	
New Housing, including New Facilities for the Education, Provisioning and Care of the Population	2,443.0
Apartment Modernization to Improve Housing Quality	336.1
Building Repair for Housing	1,428.9
Expenditures for Heat, Hot Water and Energy Supply, Refuse Collection, Seeding and Other Economic Outlays	2,243.5
Interest & Repayment of Investment Loans for Housing Construction	2,333.9
--Subsidies for Ensuring Stable Prices for Staple Goods and Tariffs for the Population	21,452.2
of which for	
Foodstuffs	11,668.0
Industrial Goods on Public Demand	6,022.9
Passenger Fares in Long-Distance and Commuter Traffic	3,004.9
Drinking Water and Sewage Treatment Fees	469.7
Repairs and Services	286.7

	<u>In million Marks</u>
--Expenditures for Small Price Adjustments and Seasonal Measures	142.8
--Expenditures for the Educational System	10,959.4
of which	
Expenditures for Public Education	7,632.3
particularly for	
the 10-Grade Polytechnical Secondary Schools, Expanded Secondary Schools and Secondary Boarding Schools	3,847.7
Instructional and Teaching Materials	129.0
Toys and Materials for Preschool Children and Pupils in School Nurseries	41.4
Pupils' Promotion	134.6
Public Education Facilities for Taking Care of and Educating Preschool Children	1,170.1
Orphanages	197.5
Reform Schools	15.4
Special Juvenile Homes	44.8
Feeding Pupils in General Education Schools and Children in Preschool Facilities	852.0
Pioneer Houses and Stations	102.8
Public Vacation Service for Students during Summer, Winter and Short Vacations	59.4
Adult Evening Schools	35.6
--Expenditures for University and Technical School Affairs	2,379.1
particularly for	
Universities and Colleges	991.2
Engineering and Technical Schools	380.5
Scholarships	643.7
Boarding Schools	132.7
Supplying Students' Messhalls	119.4
--Vocational Training Expenditures	849.4
particularly for	
Enterprise Vocational Schools and Enterprise Apprentice Dormitories	542.5
Communal Vocational Schools and Apprentice Dormitories	203.1
Practical Vocational Training in Agriculture	43.5
Expenditures for Adult Continuing Training Facilities	98.6
--Health and Social Welfare Expenditures	10,955.0
particularly for	
Hospitals	4,050.5
Polyclinics, Outpatient Clinics and Medical Practices	2,183.6
Infant Care Health Facilities	948.2
First-Aid and Ambulance Service	157.9
Hygiene Inspection and Vaccinations	134.8
State Child Money and Delivery Aid	1,434.1
Old-Age and Foster Homes	668.0
Care for Senior Citizens, Household Help and Lunches	172.2
Extra Subsidies for Large Families	54.6

	<u>In million Marks</u>
--Remittance of Credits Granted for Young Married Couples and Remittance of Interests for Credits	226.3
--National Insurance Expenditures	30,476.2
particularly for	
Pensions	15,624.1
Free Medical Care for Citizens	5,979.6
Medicines, Pharmaceuticals and Curatives and Other Health Care Expenditures	3,268.4
Sick Leave Money	3,948.6
Pregnancy and Maternity Money	770.0
Paid Job Release Subsidies for Mothers (Baby Year)	308.7
--Expenditures for Youth Facilities (including Tourism)	307.2
particularly for	
Youth Tourism, especially Trips and Hostels	255.1
Central Pioneer Camps and Youth Clubs	44.6
--Cultural Expenditures	1,759.9
particularly for	
Theaters, Shows, Movies, Orchestras	636.4
Houses of Culture and Clubs and the Promotion of Folk-Art	328.2
Museums and Visual Arts Institutions	214.1
State Libraries	148.4
Music Schools	41.1
Preservation of Monuments	55.0
--Expenditures for Maintaining Sports Arenas and Stadiums, Swimming Pools, Gymnasiums and Other Sports Installations	385.8
--Recreation and Vacation	431.9
particularly for	
Subsidizing the FDGB Vacation Service	245.8
Local Recreational Facilities like Camping Grounds, Free Swimming Pools	142.7
--Subsidies for Foreign Tourism, especially Air and Train Fares for Organized Tourist Circles Abroad	258.1
--Expenditures for Communal Measures and Services such as Street Lighting, Refuse Collection, and Taking Care of Gardens and Parks	791.8
--Radio	219.6
--Television	504.2
--State Apparatus and Economic Management Organs	3,751.9
--Civil Defense and Fire Protection	121.4
--National Defense Expenditures	10,776.4
--Expenses for Public Safety, the Administration of Law and the Securing of the National Border	4,178.0

5885

CSO: 2300/84



## SURVIVABILITY OF GAS SUPPLY DURING DISASTER DISCUSSED

Leipzig ENERGIE TECHNIK in German Vol 33 No 9, Sep 83 pp 344-347

[Article by Dr Frieder Laemmel, engineer, Karl-Marx-Stadt Energy Combine VEB, Karl-Marx-Stadt Enterprise Section: "The Survivability of Gas Supply Systems in Times of Disaster"]

### [Text] 1. Introduction

Gas distribution systems are subject to a number of damaging influences in their operation. For this reason, they can lose their functional capabilities in whole or in part. It is possible to describe their behavior under interfering circumstances by means of mathematical-statistical methods.

The effects on gas distribution systems during normal operation here differ basically from the type, magnitude, and intensity of the damaging effects which occur in the case of major accident or catastrophe. The latter are generally characterized by their massive character and by a wide-area effect.

Disturbances in daily operation are subject to stochastic laws. On the other hand, catastrophes cause damage whose sources essentially lie outside the distribution system and the calculable interference factors of the environment. They are important parameters for the continuing operation of supply systems in these situations. Besides the survivability of individual objects with respect to the probable effects, the structure, inner construction, and interactions of distribution systems have decisive significance.

### 2. The Survivability of Gas Distribution Systems

The term "survivability" represents the mathematical expression for the reliability of the system under consideration. The survivability, in accord with (1) is the capability of the distribution system to fulfill its appropriate tasks under extraordinary conditions. It is therefore a complex quantity with respect to the functional capability of networks of gas distribution, for example with respect to the effects of catastrophe. It is mainly determined by the distribution, linkage, and interaction of the respective distribution elements beyond a defined territory.

Specific predictions concerning the effects of catastrophes are generally not possible. The like holds for their intensity. Accordingly, to calculate the survivability of a distribution system, a method must be found which can be used comprehensively. The goal is to create the possibility of objectively comparing

various supply areas of the same category or size. If quality criteria are specified, these distribution networks can furthermore be classified and allocated.

All system-related and network-related changes, from the perspective of the territory, can thus be dealt with qualitatively. The cost/use ratio can be given objectively. Conclusions are possible. However, one should not in general dispense with the experience of technical personnel in the discussion of the results and the associated decisions.

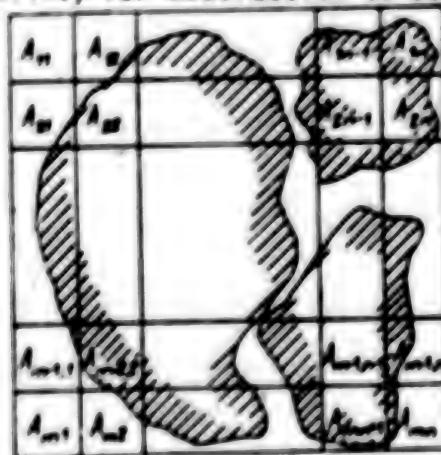
### 3. Determination of the Relative Survivability of Gas Distribution Systems by Considering System-Related Foundations

The relative survivability of a gas distribution system is a comparison value with respect to a territory of similar structure and size. It is a relative expression for the capability of the system to accomplish its supply purpose under extraordinary conditions. The calculation of the relative survivability, its objectives and its specifics, are based on the particular specifications and assumptions. The basic principles are:

- Catastrophes and their effects can occur with equal probability beyond the defined territory.
- Wide-area effects must be expected.

Building on this, the territory under consideration is divided into equal regions. Their size must be specified. This results from the objective of the analysis and from subjective judgements (Figure 1).

Figure 1. Representation in principle of the area subdivision founded on the basis of an equal probability for destruction to occur.



This results in the following calculational algorithm:

1. Specification of  $A$  by means of maps
2. Specification of  $A_m$
3. Identification of  $K_A$
4. Searching for a minimal path corresponding to destroyed territorial regions following the effects of catastrophe
5. Searching for minimal sections corresponding to destroyed territorial regions after the effects of catastrophe



6. Calculation of  $P_{rel}$
7. Shifting of  $A_k$  on the map by  $a/2$
8. Processing the algorithm
9. Shifting of  $A_k$  on the map material by  $a/4$
10. Processing the algorithm
11. Shifting of  $A_k$  on the map by  $3a/4$
12. Processing the algorithm
13. Discussion of the results
14. Further shifts of  $A_k$
15. Selection of a minimum lower estimation value and a maximum upper estimation value

$$P_{rel lower} = \min (P_{rel lower}(n)), n = a, 3a/4, \dots \quad (1)$$

$$P_{rel upper} = \max (P_{rel upper}(n)), n = a, 3a/4, \dots \quad (2)$$

$$P_{rel lower} \leq P_{rel} \leq P_{rel upper} \quad (3)$$

The  $n$ -fold shift of the corresponding "coordinate system" leads to a determination of the extremal values. Gas distribution networks in catastrophe situations, that is in the case of wide-area effects, represent systems without renewal from a system-theoretical point of view. A renewal process in the conventional sense does not take place. The sudden failure of affected system elements can be expected at the same time.

#### 4. Mathematical Foundations

A method for calculating systems with a complicated structure is the method of minimal paths and minimum sections. The definition of terms according to (3, page 231) can be applied in modified form to determine the characteristic numbers for gas distribution systems. The specifications and the assumptions that are made thus lead to a solution.

This means that a minimal path of a gas distribution system, in a defined territory, and assuming catastrophic effects, with reference to the basic representation of Figure 1, is a minimal partial set of operational zones including their distribution elements. If a single further zone fails, the gas distribution system goes over from the state of operational capability into the state of breakdown. On the other hand, a minimal section of a gas distribution system under the above conditions is a minimal partial set of broken-down zones including their distribution elements. The renewal of a single further zone leads to the gas distribution system making a transition from the state of breakdown into the state of operational capability.

The minimal paths and minimal sections can be determined, for example, by means of the minimal path and minimal section method for error trees (3, page 490) with the path-searching method (3, page 494), or also by means of a special algorithm. As a result, one obtains:

#### Determination of Minimal Paths

1. Determination of all arcs of the directed graph, whose particular break down causes an unallowable condition of the system.

2. Collection of these arcs in a factor F
3. Determination of all nodes of the directed graph with several arcs
4. Setting up all paths to the nodes that have been determined under 3 (without the arcs determined under 1)
5. Combination of all paths of a node with all paths of the nodes determined under 4
6. Inspection of combinations, while omitting
  - arcs which occur multiply in the combination
  - combinations which occur multiply
  - combinations which do not represent minimal paths
7. Collection of the results achieved under 6 with the arcs determined in the factor F.

#### Determination of Minimal Sections

1. Determination of all arcs of the directed graph, whose particular breakdown causes an unallowable state in the system
2. Determination of all nodes of the directed graph with several arcs
3. Setting up all paths to the nodes determined under 2 (without the arcs determined under 1)
4. Combination of arcs, of the paths determined under 3.

By using Boolean algebra, the relative survivability  $P_{rel}$  corresponding to relations (4) and (5) can be determined.

$$S(\underline{x}) = 1 - \prod_{\alpha=1}^m \left( 1 - \prod_{i=1}^n x_i x_i^{\alpha} \right), \quad (4)$$

$$S(\underline{x}) = \prod_{\alpha=1}^m \left( 1 - \prod_{i=1}^n (1 - x_i)^{1-x_i^{\alpha}} \right). \quad (5)$$

This means that the equivalent circuit with respect to the functional capability of the gas distribution system can be equivalently replaced by the parallel circuit of the equivalent circuits of all the minimal paths (series circuits of the complements of the minimal sections) with respect to the functional capability (compare (4)).

A good and adequate estimate of the relative survivability is possible by means of (6):

$$\prod_{\alpha=1}^m \left[ 1 - \prod_{\substack{i \\ x_i \in M_{\alpha}}} (1 - P_i) \right] \leq P_{rel} \leq 1 - \prod_{\alpha=1}^m \left[ 1 - \prod_{\substack{i \\ x_i \in W_{\alpha}}} P_i \right]. \quad (6)$$

#### 5. Further Consideration Variants

The real values for the survivability of gas distribution systems can be approximated, for example, by the differentiated evaluation of component areas in the space under consideration. In the normal case, however, only subjective values will be available (Figure 2). Here, the following must hold:

$$\sum_{\alpha=1}^n F_{\alpha} = 1. \quad (7)$$

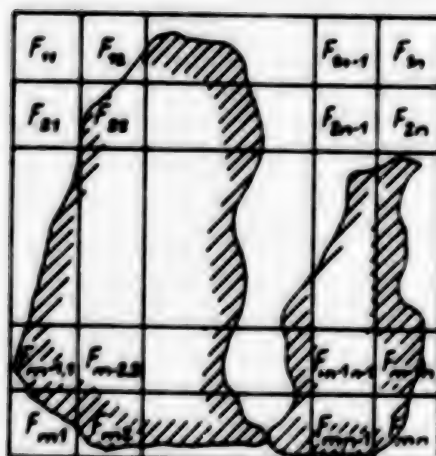


Figure 2: Representation in principle of the surface subdivision based on the assumption of a differentiated probability for the occurrence of destruction

The algorithms described in the previous section can be applied to a calculation. Results which have been obtained by this method should be used only conditionally for management decisions, on account of their subjective starting point. The degree of approximation to reality is difficult to estimate.

A basically different path can also lead to an estimate of the reliability of gas distribution systems with respect to the effects of catastrophes. The evaluation of a questionnaire to experts suggests itself here. The calculations are based on the method of rank correlation (2). One can fall back on the following execution plan:

1. Selection of the gas-supplied territories or gas distribution networks that are to be evaluated.
2. Selection of the experts
3. Ordering of territories corresponding to the reliability of their gas distribution

The criteria for selecting the experts are their qualifications, their professional familiarity with the regions being evaluated, and their areas of competence. The difficulty thus consists especially in having available a sufficiently large number of experts.

The correlative relationship of several ordered sequences will be considered. The starting point is to set up a rank matrix (Figure 3). This method is suited to obtain a relatively objective result from a number of personal statements.

	Territories					
2	1	2	...	i	...	n
1	$x_{11}$	$x_{12}$	...	$x_{1i}$	...	$x_{1n}$
2	$x_{21}$	$x_{22}$	...	$x_{2i}$	...	$x_{2n}$
...	...	...	...	...	...	...
j	...	...	...	$x_{ji}$	...	...
...	...	...	...	...	...	...
m	$x_{m1}$	$x_{m2}$	...	$x_{mi}$	...	$x_{mn}$

Figure 3. Rank Matrix

- 1 territories  
2 experts

## 6. Summary

The values of the relative survivability impart a precise impression concerning the reliability of gas distribution networks with respect to the effects of catastrophes. An objective classification and mutual evaluation of these systems thus becomes possible. A basic presupposition, however, is their same category or size. The assumption of wide-area effects and of an equal probability of catastrophic effects over the space under consideration forms the starting point of the calculation. This method can be used without complication for all gas distribution systems.

Another variant to classify the distribution networks is given by the evaluation of a questionnaire submitted to experts. By means of the characteristic numbers obtained, for example, it is possible to classify objectively the network measures as regards an increase of survivability. This can contribute towards finding the optimal location. Investments and their effects on the distribution networks can be estimated objectively. Focal points in the network will appear.

The characteristic members lead to qualitative improvements of the operational regimen of gas distribution networks in extraordinary situations. In general, however, the experience of the technical personnel must also be taken into consideration.

## Symbols Used

- A region of the territories  
 $A_K$  destroyed territorial regions after the effects of catastrophe  
 $a$  length of a territorial region  
 $F$  breakdown probability  
 $M$  minimal sections  
 $m$  total number of minimal paths with respect to functional capability  
 $P_{rel}$  relative survivability  
 $S(x)$  system function with respect to functional capability  
 $W_\mu$  minimal paths  
 $x_{ij} (\mu = 1, \dots, m)$  minimal paths with respect to functional capability  
 $x (\sigma = 1, \dots, s)$  minimal sections with respect to functional capability

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Manuscript received on 15 March 1983.

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CSO: 2300/66



## GERMAN DEMOCRATIC REPUBLIC

LIGNITE: ITS POTENTIAL, PROBLEMS

### Energy Needs Fulfilled

East Berlin PRESSE-INFORMATIONEN in German No 126, 28 Oct 83 pp 2-3

/Interview with Wolfgang Mitzinger, Minister for Coal and Energy/

/Text/ What is the significance of domestic raw brown coal in the GDR as a primary energy medium?

Our domestic raw brown coal was and is in the long term our most important primary energy medium. At this time, raw brown coal covers about 71 percent of the primary energy demand in our republic, and the proportion continues to grow. This energy policy was determined for the long term by the decisions of the Eighth Party Congress of the SED, that is already before the beginning of the oil or energy crisis in the capitalist countries.

The 10th Party Congress decided to expand a strong energy and raw materials basis. "To a hitherto unknown extent, the entire national economy must direct itself towards the direct utilization of raw brown coal," declared Erich Honecker. "Efficient energy application is becoming more and more important." Work is being consistently done on the implementation of this task.

Already today, 82 percent of the electrical energy is generated in our power plants on the basis of raw brown coal. Heat generation and supply already today take place predominantly on the basis of domestic raw brown coal. But even today a considerable portion of raw brown coal or brown coal briquettes are utilized for materials, among other things in organic chemistry and gasification. This proportion will continue to rise in the future in correspondence with its significance.

How has use grown since 1980? Have new application opportunities been opened up?

In the year 1980, 258 million tons of raw brown coal were mined and used, but in 1982 this figure already rose to 276 million tons. The fourth meeting of the Central Committee of the SED presented us with the task of

overfulfilling the planned objectives, and of furnishing, in 1985, already up to 295 million tons of raw brown coal to supply the national economy.

This is up to now the greatest production increase that must be accomplished in a 5-year planning period by the creative initiative and outstanding work performance of our brown coal compatriots in socialist competition. Here we must also note that the mining capacity of depleted open pit mines must be replaced almost in the same magnitude as growth.

In recent years, many new complication areas were opened up. Especially important is the task that was set for us by the Party and the Government, to supply heat and to supply a large number of industrial processes increasingly by using raw brown coal, beginning with the 1983/84 heating period. This task is being successfully accomplished in the area of the Ministry for Coal and Energy and in the entire national economy of our Republic.

Through an intensive scientific collaboration of the collectives of the cement industry, the coal industry, and cement construction, for example, it has been possible to use brown coal dust in place of imported energy media for producing cement.

Where do we stand today in the refining of brown coal?

In the first stage, raw brown coal is processed into sifted coal or piece coal and is successfully used in sectional boilers, smaller boiler systems, and steam generators with chain grates. In recent years, we have had good experience in substituting brown coal briquettes by sifted coal and piece coal.

In another stage, we are converting raw brown coal into brown coal briquettes as well into brown coal dust. Brown coal briquettes are used in many ways in our Republic, from domestic use up to securing the heat supply during winter peaks in selected boiler systems as well as for further refining. Brown coal dust is primarily used in the cement industry and in converted steam generators which hitherto used heating oil.

In another state of refining, one produces brown coal high-temperature and brown coal low-temperature coke as well as gas and liquid products from coking, low-temperature carbonization, and gasification. Appropriate brown coal briquettes are produced for these processes.

By increasing the quality of brown coal high-temperature coke and by intensive scientific-technical collaboration with the coke consumers, it was possible to use domestic coke increasingly for technological purposes, among other things in carbide production, in lime burning, and in sintering processes. We are working intensively on further increasing the brown coal high-temperature coke utilization for technological purposes, because the most effective use in terms of national economy is possible here.



From an overall perspective, we have had great experience in the GDR in the area of coal refining up to organic chemistry and the gasification of brown coal. Many basic chemical products have their starting point in raw brown coal.

Not least of all, the combustion of raw brown coal in the boiler installations of major plants to generate electric energy is also a form of refining. Electrical energy is needed, among other things, to an increasing extent for the electrification of sections of the state railway or for units that were previously diesel driven. Here, the level and quality of refinement is determined primarily by the specific coal consumption, which it would need to produce 1 kilowatt hour. The steady reduction of this value is an important task of the power plant collective.

Do expenditures of the national economy increase through the accelerated use of raw brown coal? Do we always handle it thriftily enough?

The expenditures of the national economy do not increase through the accelerated use of raw brown coal with simultaneous release of other energy media, but rather becomes significantly more favorable. Thus, the production of a ton of steam based on heating oil costs about five to six times as much as compared to a ton of steam generated on the basis of raw brown coal, even considering the higher transportation expenditure of raw brown coal and the expenditure of transporting the ash as well as a higher operating factor.

Finally, the economy and efficiency of use are determined by how successfully one can organize the use of raw brown coal with the greatest possible thriftiness. Increased efforts must be made to use raw brown coal and all other energy media as efficiently as possible, in order to guarantee the growth of our national economy and to assure that the needs of our populus will at all times be met energetically, safely, and in a stable fashion.

The efficient and thrifty use of energy media, such as electrical energy, gas, heat, and solid fuels is and remains a command of economic reason. On the basis of legal regulations concerning the efficient use of energy, all consumers are obliged to create the scientific-technical and organizational preconditions to increase the efficiency of their installations, to use the concomitant secondary energy to a greater degree, and to reduce losses altogether.

Every citizen can actively contribute to this. The well-considered use of energy has a two-fold utility: On the one hand, costs in the enterprises can be reduced, and on the other hand, lower growth rates are required for expensive and costly energy creation, conversion, and transmission systems, so that the means can be used for other economic and social purposes.

In the open pit mines, the miners are now thinking about winter. What tasks do they confront?

The miners are preparing themselves thoroughly for months to face the winter, on the basis of the documents decided upon by the party leadership and the

government. The tasks to be accomplished have been specified in the winter specification plans. Among these belong, for example, the repair, care, and maintenance of large units and mining systems, an accelerated separation of coal from waste, so that at the beginning of the winter adequate inventories will be available in the open pit mines, the setting up and filling up of coal storage places in the neighborhood of open pit mines, and at user locations, so that additional quantities of coal can be furnished at extremely low temperatures.

The brown coal works are already now preparing to use additional help from other enterprises, are filling up their inventories of materials and tools, which will be necessary for use in winter, and are checking whether the miners are reliably supplied with protective work clothing, warm beverages, etc. which become necessary in winter. From the experience of previous winters, we know that highest mining production is achieved even under the most difficult conditions, where there has been a long-term preparation for the winter situation. For this reason, we are taking care that there is no one who allows shortcuts as regards winter preparations.

Winter preparation - how can the entire national economy support the brown coal compatriots?

Directing my reply especially to the consumers in the national economy, I would say that a good winter supply on the one hand is the best support for the coal industry and on the other hand that it also gives to every consumer himself the guarantee that production sites can operate continuously and will be heated continuously during severe frost, ice, and snow.

Every industrial consumer is requested to adhere to the state regulations for maintaining supplies at his own storage location, and furthermore to seek for opportunities to put in further inventories. The coal industry is capable of making available the required quantities of raw brown coal.

The industrial areas which are supplied by our open pit mines, briquette factories, gas works, and power plants, with spare parts, materials, and equipment, have a very high responsibility for the smooth supply of the coal and energy enterprises, at the proper time and with the proper quality. If everyone fulfills his task, and I have no doubt about this, the brown coal open pit mines, briquette factories, and power plants, as well as the gas business and the remote heat suppliers, will supply the populace and all consumers reliably with the necessary energy media during the coming winter.

Finally, I wish to express my sincere thanks to the mining and energy workers for their previous high performance. However, the winter poses the most severe requirements to the coal and energy business, and for this reason all consumers can best support the mining and energy workers in this hard battle if they handle all energy media efficiently and thriftily and consistently adhere to the quotas.

## Environment Devastated

Frankfurt/Main FRANKFURTER ALLGEMEINE in German 2 Nov 83 pp 9, 10

[Article by Hans Herbert Goetz]

[Text] "The Pleisse plays with little waves, the shore now feels the forces new, and doubles its interior dew, and teems with bushes, moss, and clover..." It is now almost 250 years that the Thomas cantor of Leipzig, Johann Sebastian Bach, composed this recitative text from an unknown court poet into a cantata to celebrate the name day of the Saxon King August III. The Pleisse is still quiet, the river where Leipzig is located is still flowing, but it has become a turgid, brown trough and biologically dead; now, according to a Leipzig economic planner and environmental protector, it is again supposed to be brought to life. Roland Holzapfel, Chief of the Bureau for Mining Affairs in the Planning Commission of the GDR region of Leipzig, openly reports in a conversation about the worries which are created for him and for Leipzig citizens, including the planners, by the expansion of brown coal strip mining all around Leipzig. The educated hydrologist does not conceal that, here too, as everywhere in the East and West, there sometimes is a dispute between ecologists and economists, the environmental protectors and those who must implement the ambitious plans for producing brown coal, plans which were born from necessity: "Every year there are hard struggles, but we have won some terrain." The environmentalists have the citizens on their side, not only in the West but also in the GDR.

The region of Leipzig is, after Cottbus, the second-most important brown coal area in the GDR, with an output of 54 million tons. Twenty percent of the 276 million tons of raw brown coal that were mined in 1982 come from here, 34 percent of the briquettes, and not least of all that bitumen-rich brown coal which can be used for chemical purposes and which can be "low-temperature carbonized". The 9 brown coal strip mines in the area, especially those in the South of Leipzig with respectively 1,000 to 2,000 employees, are also suppliers for large power plants and chemical centers such as Böhlen and Espenhain or possibly Leuna and Buna in the Halle area. The city of Leipzig depends mainly on brown coal, but Holzapfel smilingly disputes the rumor that the best lodes are supposed to lie under Leipzig's main railway terminal: The terminal remains standing. The lodes worthy of mining are estimated at several billion tons, which means that all around Leipzig brown coal will be strip-mined far into the next century. First, coal will be strip-mined south of the city, as far as Markkleeberg, where the railway begins and ends. But for 2 years, the silhouettes of large excavators and conveyor bridges can also be seen in the North, above the fields of Zwochau in the direction of Delitzsch, on the far side of the highway that leads to Dresden. There, just as in the South, entire villages will vanish during the next years, and thus all those difficulties will arise which are associated with such "destruction". Even the highway will have to be moved somewhat, just as happened with the



railway line between Zeitz and Leipzig, or with the Weisse Elster River, for which a new concrete bed had to be created.

The GDR, which is so poor in raw materials, cannot give up the mining of brown coal. Until 1985, outputs in all the 30 strip mines of the GDR should rise to nearly 300 million tons annually; it must be speeded up because the Soviet Union cannot increase its oil deliveries at the rate of the previous years. Brown coal mining becomes more and more expensive, the yield more modest: To mine a ton of brown coal 4 cubic meters of waste must now be removed, transported away, stored, and later on must be redistributed and reimbedded. By the year 2000, the amount will be 6 cubic meters, because the lodes will lie deeper. Even more difficult is the utilization of the incident ground water; here, Leipzig with only 6 cubic meters of water per ton of brown coal is better off than other areas, where up to 10 and 12 cubic meters of water must be pumped away - until after decades perhaps new lakes and holiday parks can be created, which again costs much money. Three to four years before the first excavator cuts the ground, the process of water removal already begins. Wells are drilled, piped, water quantities are collected, and are then pumped into the rivers. For example, at the turn of the year 1978/79, the thermometer fell far below the freezing point within a few hours. At that time, nearly the entire brown coal open pit mine was shut down temporarily; tracks were baked solid in the frost, the switches were frozen, the energy supplies and still more the enterprises of the economy, including agriculture, were temporarily disrupted. But the GDR has no other possibility except mining the large brown coal supplies. The populace know this too, and it accepts the necessity.

The landscape south of Leipzig, the bleak meadows, sometimes offer a hopeless devastated appearance; real moon mountains of waste material, no vegetation, only a technical "landscape". A few maps which can now still be purchased show roads which have long ceased to exist, villages which have been leveled to the ground, or which have vanished in the 100-meter deep pits of the strip mines. Magdeborn no longer exists, nothing is left of Cröbern, and Eythra, situated in the meadows of the Weissen Elster, is just now being reduced. Founded 1000 years ago, the little city today presents a sad picture: Old houses, sometimes already torn down, have been used as stone quarries. "This house is still inhabited," such signs are seen in the village or in what remains of it - sometimes. It is told that these signs are supposed to keep away unwelcome visitors. These processes occur everywhere in the world, but are always connected with much grief; many a person has not been able to withstand such changes. The young people can manage the situation more easily, and for some of them a home in the new satellite city of Leipzig-Grünau is even an improvement. According to Berlin-Marzahn, Grünau is the second largest residential construction site in the GDR; by 1986, 100,000 inhabitants will reside there in 8 complexes. But its appearance creates doubt whether the socialist city planners of the eighties have learned from the mistakes of their predecessors.

For houses which must be left behind, the state pays indemnification. A large part of his and his colleagues' work, according to Holzapfel, was dedicated to the worries and needs of the property owners. If someone wants to build new at another location, he obtains priority construction material, which is traditionally scarce in the GDR. Whoever does not want to build, can have access to a bank account in installments of 3,000 marks each; these credits are also inheritable and are available "for nearly all purposes". A "brown coal refugee" cannot finance a car with this. There are no complaints about the amount of indemnification, so it is said. The churches try to ameliorate the cares of those who must give way; they try to maintain neighborhoods, or to create new ones, wherever it is possible. In general, the rule surely holds that those who possess little or nothing before the breakdown, generally find themselves in a somewhat improved condition. But those who owned property are rather on the losing side. The clearing out of a community such as Eythra with about 1500 families is a complicated process, which extends over years. Until the last moment, the roads must remain open, buses must be able to traffic, telephone lines must function, and certain services must be available. Industrial and handicraft enterprises must be displaced, graves must be moved.

At the south of Leipzig, during the past months, those people have gathered again and again who are suffering under the severe environmental damage and pollution, which is connected with brown coal and still more with brown coal processing in refineries, chemical plants, and carbonization plants. What the brown coal-chemical industry has perpetrated in recent years by its water and air pollution, for instance in Espenhain, Borna, or Böhlen, the literal destruction of all biological life in their rivers, as a consequence of the lack of water treatment, that is no longer being accepted without protest. Briquette factories, which one hoped could soon be dispensed with due to rising oil deliveries from the Soviet Union, were long run "until they wore down", so to speak: No more investments were made. But now the "old mills" still must continue to operate. The polluting odors are sometimes unbearable; people often feel sick. In the meantime, the combines and authorities have realized that this development must be stopped as much as possible. In Espenhain, where synthetic gasoline was already being manufactured during the war, the waste waters hitherto were drained off untreated. Now, a biological treatment system was constructed at a cost of 120 million marks. In the Zwenkau strip mine, a lake, which is larger than the Mueggelsee at Berlin, will be created around the turn of the century, when the coal has been mined. At Borna, the construction of a storage basin has been "financially covered" by 1990, as it is said. The ejection of dust and pollutants is gradually being reduced. All this costs much money. It is a matter of great effort to include these "unproductive" installations in the plans. In the plans of the Mining Authority, the recultivation of coaled-out strip mines plays a major role, also reforestation, but the ground needs between 10 and 15 years before it again produces a modest yield.

In densely populated Saxony, the solution of such environmental questions is more difficult than, for instance, in Lausitz, in the Cottbus area.



All interested parties know that they cannot do as much as they actually must. In theory and in plan, and also in the fruits of planning, the GDR is strong; but between theory, plan, and a nearly perfect socialist environmental law on the one hand and a socialism which actually exists in reality on the other hand, broad cleavages are gaping. It surely will still take a little while until "bushes, moss, and clover" again grow at the Pleisse and at the Weissen Elster.

8348

CS0:2300/88

FACTORS LEADING TO RAILWAY ACCIDENTS DETERMINED

East Berlin EISENBAHNPRAXIS in German Vol 27 No 5, 1983 (signed to press 1 Aug 83)  
pp 217-218

[Article by Guenter Krull, director of the Railway Vehicle Operation Section, Senftenberg Railway Repair and Servicing Shop: "Evaluation Premises of Railway Accidents"]

[Text] A demand that is not new but reemphasized in the key points of the socialist economic strategy is that of strictly enforcing discipline, order and safety to avoid railway accidents and irregularities. Because accidents and irregularities in the final analysis in principle always have subjective causes, they are therefore amenable to influence and are avoidable. Determining and eliminating such causes are two areas of crucial importance that are being explained in the following with reference to experience in the investigation and analysis of railway accidents and irregularities at the Senftenberg Railway Repair and Servicing Shop.

1. Investigating Railway Accidents and Irregularities

For investigating railway accidents and irregularities, the service regulations for avoiding and fighting against railway accidents and other events (Buvo) prescribe certain premises. The following generally valid premises should be given prominent attention:

- Finding and securing traces and evidence;
- questioning railroad personnel involved in the event and other witnesses;
- understanding the operational or work process prior to the event;
- establishing what happened including what was done by those involved;
- determining all acts by those involved that were in violation of legal regulations and internal service provisions, and all deficiencies in working tools, labor objects, labor organization and equipment, regardless of any causal connection between them and the event;
- clarifying and understanding the causes due to the violations determined of above-named conditions, and other conditions which objectively caused the event in a specific case, differentiating between chief and secondary causes, presentation of facilitating circumstances;
- clarifying the question of responsibility and finding those responsible by examining whether the specific duty violations established that caused the event were culpably committed;

--assessing the state of order, discipline and safety at the depot, in particular the management activity.

In duty violations, the facilitating circumstances and contributing conditions have to be thoroughly clarified through talking with those involved and at fault. Here the following factors are of importance:

- Management activity deficiencies;
- ill effects on operational capabilities (e.g. fatigue, consumption of alcohol, taking of drugs);
- health and emotional condition prior to the event;
- mental and physical suitability for the activity engaged in;
- personal stress, family or domestic troubles;
- excessive demands made at work (personnel shortage, overtime, vacation arrangements);
- demands below par (e.g. monotonous activity or activity unsuited to the physical or mental capabilities of the person concerned, insufficient demands made);
- deviations from regular operations, building activity;
- insufficient qualifications for the job;
- lack of assurance in operations;
- insufficient knowledge of the course of operations;
- insufficient knowledge of regulations in force;
- unfavorable working conditions affecting proper service;
- distraction of attention by other factors;
- sideline occupations;
- attitude toward work and to and in the collective;
- in accidents of grade I to III, how many incidents were caused in total at the depot within the last 3 years, and how often the person at fault was involved in them;
- ascertaining to what extent the person at fault attended service instructions or labor or fire protection instructions within the last year.

The chief must immediately initiate investigations on the spot and carry them to completion if possible. After having assessed the situation, he establishes the range and sequence of the incidents under investigation and assigns precise missions to all involved in the investigation within the scope of their competency. He furthermore negotiates the cooperation and delineation of the acts under investigation with the investigative organs and the official and public control and supervisory organs.

Cooperation with the transport police comes under the guidelines for the cooperation between the German Railroad and the transport police.

If the transport police takes on the investigation of the incident, acts of investigation by employees of the German Railroad require the concurrence from the chief of the transport police. The chief at the place of the incident has to make sure that the employees under his jurisdiction refrain from any acts that might under certain conditions jeopardize the regular investigation of the incident. All acts needed for rapidly returning to operations require the concurrence from the chief of the investigative organ or the public prosecutor or his deputy. The chief at the place of the incident has to make sure that the investigative organ gets all the support needed for ensuring an objective investigation.

The chief of the depot where the incident occurred must remain in constant touch with the investigative organ during investigations to ensure the analysis and its conclusion from the railroad side. When such events are taken care of by a conflicts commission, one has to proceed accordingly.

## 2. Analysis and Punishment of Railway Accidents Incurred and of Irregularities

Any violation against order, discipline and safety is to be correlated with the management process of the competent chief with the aim of setting down measures that would prevent any repetition.

The analysis of railway accidents and irregularities proceeds according to Buvo and, for the machinery administration sector of the Cottbus Rbd [Railroad Directorate], with regard to the following premises:

- Organization of the analysis by the head of the railway vehicle operation section;
- a representative of the machinery administration sector takes part;
- completing the analysis within 10 days after the end of the investigation;
- involving all social forces, transport ministry, the transport police and other authorities involved in preparing and conducting the analysis;
- drawing the safety activists and the largest possible circle of participants into the analysis;
- presenting a position paper in writing, including personal conclusions, and a personal deposition of the person at fault in the analysis;
- ensuring further analyses in all work collectives and offices; and
- setting down conclusions and measures to enhance order, discipline and safety, as e.g.
  - disciplinary measures,
  - establishing material liability,
  - curtailing the year-end bonus,
  - debts against the competition in the collective, and
  - discharge from the position by means of contract changes.

The implementation of the measures last mentioned is governed by the principles in the plan of measures for consolidating socialist legality and improving order, discipline and safety at the Cottbus Rbd district.

## 3. Considering and Analyzing a Railway Accident

On 13 October 1982 on railroad station S., when train 63263 on track 85 pushed toward the switching incline of switch 231, the second car of the train derailed with both axles. Traces and evidence established that a wedge placed in front of the front axle of the first car had been shifted to the core of the switch and had anchored there. While the axles of the first car, which was loaded, had crossed the wedge without derailling, those of the second car did derail, but that car was empty.

When all the railroaders involved in the incident were questioned, the following picture became clear:

As there were no usable hand brakes in the train or blocks or wedges on the tracks, the vehicle operator used a ballast to secure the unhitched train. The switchyard personnel then, to get the train off, removed the ballast. After getting to the refueling station, the vehicle operator subsequently placed a wedge found there in front of the front axle of the train. He did not inform the switchyard personnel or the operator of the next switch box W8. The person in charge of switch box W8 shortly thereafter directed the train across the switching incline.

Investigations showed the vehicle operator had violated Article 57 Paragraph 8 of the operations regulations, which says: "The use of wedges or blocks must be reported to the next local shunting installation." It also was found that even a subsequent safeguarding of a train is a violation of the provisions of AzFV [appendix to train service regulations] Part I, because in the arrival sector east of railroad station S. AzFV Part I Column 7 authorizes the securing of trains on the adjoining tracks 82, 83, 108 and 109 only.

When the causes for the irregularity were determined it was found that the vehicle operator was poorly informed about Article 57 in the operations regulations. Nor did the operator know the specific rules of AzFV Part I Column 7. Specifically, he did not know the numbers of the tracks on which trains may not be subsequently secured. He acted in the belief in utmost safety for trains on sidings. His act was facilitated by that in the past railway accidents had occurred because trains in this arrival sector had not been secured and the subsequent didactic reiterations by the supervisory personnel in charge. Another circumstance that encouraged the irregularity was the fact that none of the tracks in the arrival sector had a track number and the vehicle operator had but rarely entered that arrival sector with a train.

In spite of these mitigating circumstances the investigation concluded that the irregularities of the vehicle operator definitely were duty violations causing the incident for which he was at fault.

In determining subjective facilitating circumstances it was found that they lay exclusively in his not being sure of operations because he had a poor knowledge of the regulations governing them. All other factors contained in the compilation above were inapplicable and without substance.

The analysis of the railway accident of the fourth grade proceeded in accordance with the premises contained in section 2. In setting down penalties for the vehicle operator account was taken of his good work thus far, his high dedication, and the positive inferences he himself had drawn and shown through his personal deposition in front of all those involved in the analysis. The following measures were set down and carried out:

- Disciplinary proceedings leading to a reprimand,
- material liability for costs of the investigation and of eliminating the consequences of the accident,
- trimming the annual bonus by the amount of one month (October),
- reducing the bonus wage rate by applying the quality parameter of 2,3 for the month of October, and
- charging the accident against the competition and performance comparison in the service planning communities for the fourth quarter.



By drawing general inferences for avoiding similar incidents in the future, the following measures were taken:

- An analysis of the accident in all service planning communities and the collectives of operations sections;
- more instruction on AzFV with tests on the state of knowledge;
- applying to the Railroad Office for an amendment of AzFV Part I to simplify the securing of trains on all tracks in the arrival sector; and
- requesting the numbering of all tracks in that sector.

#### 4. Final Comment

The application of above premises for investigating and analyzing railway accidents and irregularities aims at preventing identical or similar incidents. It is, however, an essential prerequisite for an effective application that a truthful, precise and comprehensive account of such an incident is provided by all involved.

To accomplish this, each railroader must have a pronounced sense of responsibility, great socialist legal consciousness and absolute and firm confidence, as far as the relationship between the chiefs and the collectives is concerned.

5885

CSO: 2300/93

## NEW JAPANESE TECHNOLOGY POLYPROPYLENE FACTORY BECOMES OPERATIONAL

Budapest NEPSZABADSAG in Hungarian 20 Oct 83 p 6

Article by Gyorgy Attila Kovacs: "Leninvaros's New Factory Has Gone On Stream"

Text Andor Huszar, director general of the Tisza Chemical Combine ringed by guests wearing red-and-blue protective helmets, on 12 October at 3:30 pm pressed the starting button of the pump which feeds the catalyst Y into the system. The home video tape recorder was humming, the cameras were clicking, flash guns flashing. There were handshakes. With the engineers of the Japanese Sumitomo firm which delivered and started up the factory, with representatives of the more important Hungarian suppliers cooperating, and with workers who participated in the implementation. Following this, we started to go to the central control room where besides the technicians assigned to the imposing control panel, of course nobody knew what the "group display screens of the microprocessor-equipped shared intelligence process control and regulating system combined with a controlling computer, each showing the numerical tabulations and graphs of measured data of eight control circuits..." were showing exactly.

## Exemplary Performance

We are trying to understand from the conversations on the UHF sender-receivers whether everything is in order. After a month of hot and cold partial tests this is the first time the system was charged with propylene and hydrogen. The catalyst was "primed," and in a few hours--perhaps around midnight--polymerization should begin. And if everything is in order, the first powdered polypropylene should appear in the finished product bins by about daybreak. We are dealing with a complicated technological process and dangerous materials. We know that much that if there is a problem the whole reaction comes to a halt, or--or it could also explode.

We are really not at ease when we hear things like this:

"Should we change over to hexane? Isn't the temperature too high?"

No, there is something else Mr Suzuki does not like!

A little later, the same voice as before "No problem, everything is all right even so. What's with the compressor? It is all right!"

Well, but there indeed was one small thing: one of the catalyst lines plugged up! But that causes no problems any longer either.

Of course director general Andor Huszar, chief plant engineer Laszlo Kiss, as well as plant manager Istvan Varga are more relaxed than the laics. They even say why. First: the builders did not only quick but also thorough and good quality work. Second: this technology is the most modern in the world and it is among the most highly automated chemical industrial technologies. Third: as I find out in the computer room from Zoltan Csermeny, manager of the TVK's [Tisza Chemical Combine] instrumentation-automation main department, the computerized control has been working continuously since early September without the slightest error. But if now on the occasion of the first full charging some irregularity were to occur, the reserve regulating units would automatically take over. And if the "hot reserve" would also malfunction, there is still always the manual manipulation system which makes intervention possible.

So that now I am more at ease standing behind the back of the systems operator Peter Tozser, and listening to the mysterious words: "1008 opens, closes! Is it enough, Tivadar? Then I am shutting it, the number 1007 is closed," comes the reply over the radio.

#### Routine and Renewal

Those who are familiar with the Tisza Chemical Combine which each year produces over 15 billion forints in production value, may perhaps say: actually, for the people of Leninvaros it was routine work to build the new polypropylene plant at a cost of 2.1 billion forints, with an annual performance of 40,000 tons. In many respects they really can rely on the experience of their own investment organization, machine manufacturers and instrument installers, since the country's first polypropylene plant which also has 40,000 ton capacity, began production in the same place here in 1978. Experience and the self-sacrificing willingness of the socialist brigades had no small role in the facts that the Polypropylene II factory with identical capacity--which we can also regard as expansion of the first plant--cost half as much as the old one, that 28 months instead of 36 were needed to build it, and that in spite of the various price increases in the construction industry it was not necessary to use the reserve funds available for the investment. The investment of plant No I also served as example for any major construction project in the country. It also contributed to the more successful building of the new plant that during these few years chemical industrial technology itself as well as electronics underwent rapid growth. While there are five reactors in the first plant, there is only one in the new one even though the output is the same: In the old one the solvent needed for production had to be produced separately, while here polypropylene can be made without solvent. At the same time a much larger finished product storage silo park could be built as part of the new investment, and a plant section was also built to utilize the waste energy given off in the technological process. It is also

nothing to frown on that while the polypropylene plant's capacity is doubled, the number of operating staff has to be increased by only two or three people and now on each shift ten people will be working in the two plants instead of the eight before.

#### The Central Goal--Their Own Resources

By starting polypropylene production, the Tisza Chemical Combine in accordance with the goals of the petrochemical central development program made it possible to save large amounts of capitalist import since the late 1970s. Since demand for the product increased quickly on all sides, the decision was made in 1980 to build a new plant. The foreign trade contract with the Sumitomo firm was signed in the spring of 1981, ground was broken in May, and construction all along ran according to the predetermined schedule. The Hungarian-Soviet olefin agreement also hastened construction of the Polypropylene II plant; according to this the Tisza Chemical Combine will receive propylene from Kalush in the Soviet Union beginning with 1986-1987, as will the Borsod Chemical Combine in Kazincbarcika. We will be providing polypropylene in exchange for it.

The significance of the successful investment is also heightened by the fact that this is the first time they implemented such a high value development decisively from their own strength, their own development resources and from bank loan.

Can we say more or anything more important about the new factory than this: it produces a product that is in demand in this country as well as abroad. And another thing which is also important is that the new plant was built within the prescribed cost in shorter time than planned, on an outstanding technological level. Even this year during the time of the trial runs the people of Leninvaros expect 4,000 tons of commercial grade product from it.

8584

CSO: 2500/39

MINISTER WRITES ON ROLE, PROSPECTS FOR BEEF CATTLE BREEDING

Budapest MAGYAR MEZOGAZDASAG in Hungarian 5 Oct 83 p 3

Article by Dr Laszlo Papocsi, deputy minister. The article is based on the lecture delivered at "Beef Cattle Breeding Days" in Kaposvar

**Text** It is an historical fact that Hungary has a tradition several centuries long in the field of cattle breeding and beef cattle breeding. Our good reputation was not "used up" even during the past decade since the quality of Hungarian beef cattle has always been acknowledged on every market important to us and even today it enjoys a special value and ranking. We must now be occupied with the situation of the beef cattle branch and the possibilities of its further advancement because it is a basic goal of the government to develop this branch at a faster rate, to a greater extent and in a more coordinated manner than before.

Reasonable Development

Advancement, a faster rate of expansion of production in this branch is justified by several factors.

1) In Hungary, cattle breeding represents the production of about 13 percent of agricultural goods and about 27 percent of animal breeding. This proportion cannot be considered adequate. Especially not if we consider our natural endowments and ecological circumstances. By means of cattle breeding, significant and as yet untapped capacities could be drafted into the value-producing process. The unused grassy areas and agricultural byproducts are reserves which can serve as foundation for the further advancement of beef production.

2) In the course of the 10 year history of the beef cattle branch, methods, technologies and economic experiences have evolved the encouraging results of which offer the possibility for expanding the range of application of the procedures used in the foremost enterprises.

3) Beef is an important product in the nutrition of the population and it is also an export item which can be easily sold on every market. During the past



few years, the nationwide beef cattle production was between 320-330,000 tons. Fifty-two percent of this was exported. The per capita construction (including meat products) was about 9.5 kg beef with bone.

Beef cattle and beef export represents a 200-220 million dollar annual income to the national economy. This is 17 percent of the non-ruble exchange agricultural exports. Domestic consumption is not expected to increase significantly and, therefore, the increase in beef production will serve preponderantly export goals. Moreover, compared with the fodder consuming branches, the possibilities of finding export markets for beef have the promise of being more secure and longer lasting.

4) According to the assessments, the productive land circumstances, ecological potency and beef cattle-raising capacity of our country is several-fold more than currently utilized. By increasing the yield of grasslands and utilizing the suitable areas, spectacular advancement could be made also in the beef cattle branch.

The rate of advancement was influenced by numerous factors some of which are still having a retarding effect. I am primarily referring to traditions and approaches. The system of stabled raising and breeding, based on using grain fodder, which was developed and was gotten used to during the past decades, became a habit which was difficult to change to beef cattle raising based on pastures and mass fodders. Added to this was the extremely long generational interval of cattle which requires several years to go from the decision to execution and its results. The beef cattle raising systems played a great role in the changed approach.

The rate of development was also influenced by the fact that the natural requirements of the beef cattle branch can be met best of all at unfavorably endowed farms but, at the same time, these enterprises usually lack the financial resources and conditions for development. The unfavorable changes in foreign economic conditions also had a negative effect on the development of the branch. In recent years, because of marketing difficulties and the considerable drop of prices on the international market, the incomes failed to provide stability with respect to the profitability of production.

#### Unfavorable manifestations

The studies involving the evaluation of the farm costs of beef cattle production during the past 2 years, show a composite picture. Based on the analyses it can be concluded that in 1981 the beef cattle ranches spent, on the average, 4-5 forints more to produce 1 kg fattened weight than did the dairy and dual-use cattle ranches. Because of production factors and the increase in price levels, the production costs of beef cattle have increased in both branches of fattening since 1981. Although in 1982 the extent of this increase was lesser in the meat-producing branch, nevertheless, the expenditures are still higher than in the case of fattening dairy or dual-use stocks.

Analyzing the causes of this unfavorable phenomenon, the following conclusions can be reached:

On beef cattle raising farms, the cost of fodder is higher. The reason for this is that so far very few farms succeeded in introducing the use of low cost fodders. The raising of beef cattle and calves is not based primarily on grazing and by-products while fattening is done by the traditional method using mainly grain feed.

Labor costs, amortization and the costs of the auxiliary plant are also higher. This indicates that the low cost forms of production technology have not yet evolved, there is much manual labor and a significant demand for buildings, and the machine costs of running the farm are also considerable. The problems are increased by the fact that, in the beef cattle branch, the cost of raising the cows must be born by a single product, the calves.

On the part of the beef cattle trade, acceptance according to quality is not invariably assorted. The interests of the enterprises could be increased to the greatest extent if the prices received on foreign markets would be returned to the producers in a differentiated manner--according to quality.

The rate of development in the beef cattle branch was also decreased by largely failing to arouse an interest toward it on the part of the enterprises since the development of the beef cattle branch has a large demand for implements, returns are long delayed and the ratio of profit yield to implements was low. There is great scarcity of capital in a significant part of the farms. At the same time, machines and technologies for improving the condition of pastures, gathering fodder and storing it are costly. A considerable part of them comes from capitalist imports and thus their acquisition is also difficult.

In spite of the unfavorable circumstances which decrease the rate of development, on the basis of an evaluation of the current practices and experiences we can, nevertheless, conclude that our beef cattle production travelled through a very significant road during the past decade.

#### The Conditions of Profitability

In the interest of expanded production and improved profitability, one of our most important tasks is the broad scale introduction of raising methods based on pasture and mass fodders. According to our calculations, the annual fodder requirement of beef cattle production, expressed in starch value, is 2.8 million tons. This is satisfied by 1 million tons of grain fodder and 13 million tons of mass fodder. The mass fodder consists of 5-6 million tons of plants grown on ploughland, 3-4 million tons of byproducts and 2-3 million tons of grass. Expressed in starch value, this means that the fodder requirement of beef cattle raising is satisfied by the farms in these average proportions: 29 percent grain feed, 36 percent ploughland plants, 21 percent grasses and 14 percent byproducts. The profitability of production can be achieved only if--similar to other industrially developed nations--we will satisfy the fodder requirement of beef cattle raising by using 60-65 percent grasses, 15-20 percent byproducts and at the most 20 percent grain feed.

Of special importance is the task of production systems and farm managers in the development of beef cattle raising based on pastures. A rapid rate of production development decisions is needed. We consider correct and we support significant plant production integration and the cooperation of beef cattle raising systems for the development of beef cattle raising based on mass fodders.

A many-sided analysis of the enterprisaal condition system of production and an increase in its profitability are very important tasks. At leading farms, methods and technologies have already been developed which represent the industrial conditions of profitable beef cattle production. Therefore, we consider it extremely important that these experiences become widely spread as soon as possible. Of the industrial tasks of the branch, the following are stressed. Finalization of breed selection and of a breeding method adaptable to the characteristics of the industry and satisfying market demand, and the assertion of heterosis-effect. The establishment of industrial dimensions adapted to the circumstances. In the enterprise, beef cattle raising must become a branch, the extensive mode of raising cannot be substituted by primitive, unprofessional, "game preserve"-like solutions. It would be advantageous to work out the relationship between large enterprises and household plots also in this branch. The cost saving methods of raising and feeding must become universal. It is necessary that the improvement of the effectiveness of manual labor be promoted by enterprise-organizational methods.

In the interest of a more rapid rate of expansion of the beef cattle raising branch, the common incentive system of production, marketing, processing and export marketing must definitely be instituted. In this matter, the farms must reach genuine cooperation with the production systems, the Livestock Trading and Meat Industry Trust, and the foreign trade enterprises.

These days there is much talk about the conditions of the national economic environment also in connection with beef cattle raising. In today's complex situation, also influenced by the foreign economic conditions, the management of the branch endeavors to promote the development of beef cattle raising to the farthest limits of the available possibilities. This is also supported by the fact that, among the national economic conditions planned for 1984, the beef cattle branch and, within it, beef production is the only one where we expect to be able to improve profitability.

Within the regulatory modifications, we plan a differentiated increase in purchase price and also a slight increase in the support of veal calves. At the same time, support frameworks will remain which, together with the improvement of the industrial conditions for production, provide for the profitability of beef cattle production. Our goal is to dynamically increase beef production and, in addition to beef cattle raising, this will also be promoted in other areas of the branch.

2473

CSO: 2500/40

## BRIEFS

ACADEMICIAN, ECONOMIST JANOS KORNAL--Janos Kornal was born in 1928. He began his career as journalist writing in the field of economics. His scientific career began in 1955. His first book, "The Overcentralization of the Economy" was published in 1957 at which time it caused quite a stir, not to mention suspicion, among persons who clung to a voluntaristic economic policy. However, 14 years later, at the time of the reform of economic mechanism, his views became the official policy. Kornal was the first Hungarian economist to make a scientific study of economics based on mathematics and computer modeling. He now enjoys international renown and is honorary or corresponding member of the following institutions: the American Academy of Sciences, the British Academy, the Royal Academy of Sweden, and the universities of Paris and Poznan. For 10 years he was vice chairman of the UN Development Plan Committee. He has taught at and been invited to lecture at 10 foreign universities; he has published eight volumes on economics, several abroad and his works have appeared in 10 languages. He has received numerous high awards abroad and most recently has been given Hungary's highest award: the State Prize. He recently gave his inaugural address at the Hungarian Academy of Sciences. The address is being published in full in the top economic periodical: KOZGAZDASAGI SZEMLE. [Excerpt] [Budapest MAGYARORSZAG in Hungarian 23 Oct 83 p 24]

CSO: 2500/73



IDEAS FOR IMPROVEMENT OF CLASSIFICATION OF BRANCHES OF ECONOMY

Bucharest REVISTA DE STATISTICA in Romanian Sep 83 pp 1-5

[Article by Univ Prof Dr C. Stefan, "Stefan Gheorghiu" Academy]

[Text] By its content the classification of the branches of the economy involves a grouping determined on the basis of uniform scientific criteria of all the socioeconomic activities in the economy, for the various branches, subbranches and homogeneous groups of activities; it provides a unified framework for the structuring of information for planned management of socioeconomic activity and analysis of economic growth.

Because of its content and role, the classification of national economic branches represents the basic classification, which underlies also the other economic and social classifications and lists used in the management of the economy.

The classification of the branches of the economy is a basic instrument in the organization of the recordkeeping system, of the statistical and accounting data-processing system of planning and, by and large, of the socioeconomic data-processing system, in the formulation of the uniform national plan for socioeconomic development and in the monitoring of the implementation of the five-year and annual plans, and also in the survey and analysis projects needed for the management of the economy on scientific bases.

Because of its utilizations, the classification of the branches of the economy officially adopted at one point is mandatorily used, over a long period of time, in projects of statistics, planning, accounting and other projects needed for socioeconomic management. The official adoption of a new, upgraded classification of the branches of the economy occurs at the end of long periods of time, respectively after a span of significant quantitative and qualitative accumulations in socioeconomic development which require corresponding changes in the classification of the branches of the economy.

The classification of the branches of the economy adopted under the 24 May 1962 Decision No 483 of the Council of Ministers was conceived in light of the structure of the economy and its trends during the period involved.

Based on the 1972 Decision of the Central Committee of the RCP on upgrading the socioeconomic data-processing system, the Central Directorate for Statistics, in



conjunction with the State Planning Committee, the Ministry of Finance and other central economic bodies and with the broad support of experts in educational and research units, during the 1978-1980 period, worked out the draft improved classification of the branches of the economy. The rapid development of the productive forces, increased social division of labor, the needs for upgrading specialized branch management and planning, the application of the new economic and financial mechanism, the profound changes that occurred in the structure of the economy, the influences and trends of modern scientific and technical progress, the enhanced importance of some types of activities and the provision of the conditions needed for comparing Romania's level of socioeconomic development with the level achieved in other countries involve the chief factors that underlay the improvement of the classification of the branches of the economy adopted in 1962.

The new classification of the branches of the economy was used in the projects for the formulation of the uniform national plan for socioeconomic development for the 1981-1985 period, and the statistical monitoring of the implementation of the uniform national plan proceeded beginning in 1981 based on the new classification. In regard to some activities, to their nature and demarcation and, respectively, to their reflection in the classification of the branches of the economy, there normally are and will continue to be different opinions, both at home and abroad. In our view, however, such opinions must not be an obstacle to applying the new classification of the branches of the economy, conceived according to the current stage and prospects for development of our economy, to the needs of economic management.

Worthy of note among the principles involved in the formulation of the new classification of the branches of the economy and the upgrading achieved by the new classification are:

1. In the formulation of the new classification, in the grouping of socioeconomic activities in branches, subbranches and groups of activities the focus was on creating the conditions that would more broadly enable comparing Romania's level of development and economic structures with that of other countries;
2. For the purpose of most completely reflecting the input of each branch and sub-branch of the economy into the achievement of the social product and the national income and of ensuring full harmony between the content and range of specialized branch indicators, in the new classification of the branches of the economy the basic principle adopted involved the nature of the activity, respectively the production method;
3. The purpose of grouping socioeconomic activities in the various branches of the economy also involved reappraising the nature of work in some areas of activity. For instance, besides the activities included in the area of material production, in accordance with the 1962 classification of the branches of the economy, the new classification in the sphere of material production also includes other activities, such as passenger transportation, telecommunications that serve the population, laundromats and dry-cleaning units, urban transportation, scientific research and other activities, internationally regarded as activities producing social product and national income;

4. The new classification of the branches of the economy divides socioeconomic activities into a larger number of distinct branches of the economy. The rapid development of some socioeconomic activities rendered necessary their distinct identification as branches of the economy; in the new classification of the branches of the economy the following fields of activity were grouped in distinct branches of the economy:

a. Cultural and artistic education, activities that have expanded and have a different role in the economy;

b. Tourism, an activity that has continuously expanded and its separation into a distinct branch of the economy permits the broader estimation of the development of tourism activity. Under the old classification of 1962, this activity was included in the branches of communal administration and health care;

c. Physical education and sports from health care and social welfare;

5. In the new classification a broader division was provided for the activity within the framework of the economy in the various subbranches and groups of activities, especially in industry, for the purpose of obtaining the information needed for in-depth estimation of their correlations and trends of development.

As was specified, the new classification of branches of the economy has not yet been made official. Proceeding from this fact we would like to suggest a few aspects tied to the finalization of the new draft classification of the branches of the economy.

1. According to the new draft classification, socioeconomic activities are divided on the basis of three successive steps -- branches, subbranches and groups of activities versus four steps in the classification adopted in 1962. Regarding this matter, it must be underlined that in compliance with the old classification of 1962, socioeconomic activities in the economy were divided on the basis of branches of the economy, and the activities of each branch of the economy were divided on the basis of three steps: subbranches, groups and subgroups. In the new classification, socioeconomic activities in the economy were grouped in branches of the economy, and the activities of each branch of the economy were divided on the basis of two steps: subbranches and groups of activities.

At first sight, the division of the activities of each branch of the economy on the basis of two steps -- subbranches and groups of activities -- versus three steps in the old classification -- branch, subbranch, groups of activities -- appears as a simplification. A closer analysis clearly points out that renunciation of grouping the activities of the branches of the economy on the basis of three steps is not of a nature to permit the corresponding study of the changes that occur in the structure of the activity in each branch of the economy. For instance, the grouping of machine building industrial activities in subbranches and groups of activities adopted under the new classification, by and large, by the aggregation of these activities, permits the obtaining of the volume of the activity in the machine building industry. However, the renunciation of the division of industrial activity, primarily, on the basis of industrial branches and direct switch to division of industrial activity on the basis of subbranches and groups of activities may also generate arbitrary aggregations of activities. For the purpose of comprehending

this matter, we should also add that, according to the new classification of the branches of the economy, the notion of branch of the machine building industry, of the chemical industry disappears. Consequently, we believe that it is necessary to adopt, in the new classification of the branches of the economy, also, the division of the activity of each branch of the economy on the basis of three steps, in light of the complexity of each branch.

For the purpose of broader estimation of the correlations and trends of development of the activity of the branches of the economy an ampler division of the economy in the various branches is justified. For instance, for the purpose of studying the process of industrial activities in a greater number of branches, respectively in 25 branches versus 18 in the old classification, namely: electric and thermal power industry, coal industry, coking chemical industry; crude oil and oil gas extractive industry; methane gas extractive industry; crude oil processing industry; ferrous ore extractive and dressing industry; ferrous metallurgical industry; nonferrous and rare ore mining and dressing industry; nonferrous metallurgical industry; nonmetallic ore mining and dressing industry; industry of products from abrasive substances, coal and graphite; mining and dressing industry for raw materials and supplies for the building materials industry and for construction; the machine building and metalworking industry; the chemical industry; the building materials industry, the logging and woodworking industry; the pulp and paper industry; the glass, china and tile industry; the textile and knit goods industry; the garment industry; the leather, fur and footwear industry; the food industry; the printing industry; other branches of industry (the combined fodder industry, the cottage industry, the activity for catchment and treatment of industrial and drinking water, the activity of primary and industrial processing in the holdings of the population, and the like).

The classification of industrial activities in the above-mentioned 35 branches, in our view, permits a complex analysis of the structure of industrial production corresponding to the current stage and the prospect for expansion and upgrading of the structure of industrial production and aggregation of industrial activities for the purpose of surveying various facets of industrial activity (survey of the correlation between the mining industry and the processing industry and other facets).

2. In the new draft classification of the branches of the economy there is a distinct specification of a new branch of the economy designated as "management of water resources." This branch includes the activities involving the management of water resources, the water supply to localities, industrial needs and irrigation, discharge and treatment of water in localities and from industrial processes. The analysis of the nature of the activities and purpose of the activities included in the branch "management of water resources" highlights the constitution of this distinct branch of the economy from different kinds of activities. For instance, the activity for the production, transportation and distribution of water for industrial purposes, for construction, transport and other technological needs is by its nature an industrial activity, the activity of irrigation is part of the services provided for agriculture, the activities for the transportation and distribution of drinking water for localities, for sewage systems, are specific activities of communal administration. Hence, the constitution of these activities into a distinct branch of the economy, in our view, is conducive to distortion of the volume of activity in some branches of the economy (of industry, agriculture, communal administration).

3. In terms of the sphere of activities considered in the calculation of the social product and the national income, in our country, as is known, applied is the system of balances of the economy, which is based on the material concept on production. According to this concept, the social product and the national income are created only in the branches that turn out material assets and services (of production).

In the new draft classification of the branches of the economy, in its current form, no grouping is made of the branches of the economy for the two spheres of activity -- creative and noncreative of social product and national income, in accordance with our concept in this regard. We would like to advance a few suggestions for the purpose of resolving this problem:

a. In the first place, concerning the designation of the two spheres of activity -- creative and noncreative of social product and national income. All the activities that unfold in the economy are useful activities for economic and social progress. Proceeding from this fact, we believe that it is more advisable to utilize for the designation of the sphere of activities creative of social product and national income the notion of "sphere of material production and production services" and the notion of "sphere of consumption services and of other nonmaterial services" to designate the sphere of activities noncreative of social product and national income.

b. As for the grouping of branches of the economy in the two spheres of activity, also considering the reappraisal of the nature of the work done in special fields of activity, based on broadly expressed views to this effect, we propose the following grouping of the branches of the economy:

I. Sphere of Material Production and of Production Services:

1. Industry; 2. Agriculture; 3. Silviculture; 4. Administration of water resources (if it will remain as a distinct branch of the economy); 5. Construction; 6. Transportation; 7. Telecommunication; 8. Trade; 9. Research, development and design. We believe that all the activity of applied and basic research and regardless of the field of activity in which it unfolds should correctly be regarded as a productive activity, creative of social product and national income, considering the organization of the activity of scientific research on the basis of self-management, realization of this activity for the purpose of resolving major current and long-range problems of economic activity; 10. Tourism; 11. Communal and housing administration; 12. Other branches (data processing -- computer centers, computer stations -- and others).

II. Sphere of Consumption Services and Other Nonmaterial Activities:

11. The sphere of consumption services and other nonmaterial activities: 1. Education; 2. Culture and the arts; 3. Health care and social welfare; 4. Physical education and sports; 5. Finance, banks and insurance; 6. Administration; 7. Political and civic organization.

We formulated a few proposals that may be instrumental in the finalization of the draft of the new classification of the branches of the economy; in our view, the upgrading of the new classification of the branches of the economy in terms of the aspects which we discussed is of outstanding theoretical and practical importance.



CEMA CONFERENCE ON CLASSIFICATION OF BRANCHES OF ECONOMY

Bucharest REVISTA DE STATISTICA in Romanian Sep 83 pp 63-64

[Unsigned article]

[Text] The conference of statistical experts from CEMA countries was held in Bucharest over 21-24 June 1983. The participants examined the upgraded draft of the classification of the branches of the economy used in the activity of CEMA bodies.

The conference, as the temporary working body of the CEMA Standing Commission on Cooperation in the Field of Statistics examined and agreed on adaptation of the classification of the branches of the economy, a methodological document which creates the conditions for ensuring comparability of data among CEMA countries.

In addition to its deliberative character, by the debate of the issues relating to the grouping of activities in branches and subbranches of the economy, by the participating delegates' description of their national practices, the conference provided a fruitful exchange of experience which contributed to the development of the theory and practice of economic statistics.

As is known, the classification of the branches of the economy is a central factor in socioeconomic classifications and lists and is a basic tool in surveying and characterizing the social division of labor, the structure, structural movements and directions of development of the economy.

The formulation of a uniform classification of branches, agreed upon by all the participating countries is aimed at ensuring international comparability of data on the development of the economy of CEMA countries.

Within the classification, socioeconomic activities are grouped in branches, subbranches and groups, according to the nature and specific of each activity.

In this context, used as basic criteria for the grouping of activities are the functions which they fulfill, in terms of social division of labor, in the system of extended socialist reproduction.

The basic criterion is, in its turn, completed by a number of specific criteria, among which: the character of production, the characteristic features of the production processes, the purpose of production, of the raw materials extracted or processed, the social functions, and the like.



The project of upgrading the classification of the branches of the economy in force stemmed from the need for characterizing the changes that occurred in the economic structure of countries, the new trends that emerged in their development as a result of the implementation of the latest advances in science and technique, and the measures to increase the efficiency of social production.

The Romanian delegation, in its capacity as author, jointly with the CEMA Secretariat, made efforts, in the approaches suggested, to take into account the considerations of the other delegations, to find points of contact that satisfied all countries, and as the host country ensured the smooth and successful unfolding of the conference proceedings.

The classification formulated and agreed upon at the conference points out, additionally, versus the one in effect, a number of subbranches and groups, and makes specifications in terms of the contents of the groupings utilized, the methodological principles and the definition of the classification unit.

Moreover, the classification permits the grouping of activities in the two spheres of production, material and nonmaterial (consumption services), the grouping of industrial activities into extractive and processing ones.

The discussions held at the conference pointed out the need for regrouping some activities, in the so-called collecting branches, designed to serve requirements of socioeconomic analysis. For instance, it was proposed that aggregation should ensure obtaining of information on the totality of consumption services, the sphere and activity of the agroindustrial complex at the level of the national economy, and the like, with the prospect for the formulation of the methodological principles in a future stage.

The participants in the conference agreed to continue investigations for the upgrading and adaptation of the classification for the utilization of all the resources provided in the activity of analysis of the economic structures of the countries involved and at the level of CEMA countries in their totality.

11710

CSO: 2700/44

## BRIEFS

DANUBE-BLACK SEA CANAL PROGRESS--Bucharest, AGERPRES 7/11/1983--The sluices of the Danube-Black Sea Navigation Canal Romania is building in Dobrogea between Cernavoda and Agigea started being filled with water. This is one of the most important operations as it precedes the commission of the canal. The Danube-Black Sea Canal crosses Dobrogea from west to east and will be 64 km long. Two sluices have been built at the two ends of the canal--Cernavoda (on the Danube) and Agigea (on the sea)--each being 310 m long and 25 m wide and with waiting ports both up- and downstream. The canal will shorten the distance to the sea by 380 km. Here are some of the technical characteristics of the canal: bottom width 70-90 m, constant depth 7 m allowing a two-way navigation of river- and sea-going ships of up to 5,000 dwt or of 4-6-barge trains (3,000 t each). Three ports are being built along the canal. Seven railway and road bridges link its banks. [Text] [AU071150 Bucharest AGERPRESS in English 0907 GMT 7 Nov 83]

CANADIAN TRANSPORTATION AGREEMENT--Bucharest, AGERPRESS 27/10/1983--On October 27, in Bucharest, an agreement was signed between the governments of Romania and Canada, concerning the civil air transportation. The agreement sets the juridical aspects of collaboration in point of air transportation of passengers, goods and mail between the two countries. [Text] [Bucharest AGERPRES in English 1507 GMT 27 Oct 83 AU]

CSO: 2020/26

## MONEY SUPPLY IN FIRST HALF OF 1983

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 30 Sep 83 p 5

[Article by D. Brdar: "The Level of Moderation Was Not Expected; Money Supply Movement and Net Domestic Assets for the First Half of the Year"]

[Text] Monetary resources in the production sector grew by 26 percent compared to the same period last year. The growth was much slower among the remaining users. Dinar deposits grew at a slower rate, and foreign currency deposits at a faster rate, than last year.

The money supply grew by 24.6 billion dinars for the first 6 months of the year, or by 3.3 percent compared to the level of December, 1982. According to a report by the National Bank of Yugoslavia on the realization of joint policy concerning money, credit, and the issuance of financial instruments, this is a very modest increase, significantly more restrained than the levels of growth for the same period last year (32 billion dinars, or, a 5.5. percent increase), as well as the levels that had been expected (50 billion dinars, or, a 6.8 percent increase). These trends materialized at the beginning of the year and were very much the same from month to month.

Nor were there major deviations or surprises in distribution by sector. In accordance with seasonal factors, a decrease in monetary resources took place among organizations in the production sector, and a relatively high seasonal increase materialized in SIZ accounts in the production sector. Monetary resources of social-political communities decreased--this cannot be tied exclusively to seasonal influences, but mostly to rather sharp restrictions on opstina and communal consumption.

Among the remaining organizations, there were somewhat larger differences in the movement of monetary resources of SIZ social sector operations. These resources increased by 0.3 billion dinars, while in the first half of last year they increased by 5 billion dinars. And here, the measures taken to restrict consumption had the greatest effect on the decrease.

Cash money in circulation in the hands of the populace had a seasonal rise, but the growth achieved was more moderate and quite a bit less than for the same period last year.

## Bank Investments in Leading Role

However, one can notice more significant deviations by individual sectors looking at yearly comparisons. Monetary resources in the production sector were 26 percent higher at the end of June of this year than for the same period last year, although during conditions of restrictive monetary and credit policy the increase is usually much more moderate, or sometimes a reduction in these monetary levels even takes place. At the same time, the annual rate of increase among the remaining social sectors was at a significantly lower level, despite the fact that a higher growth rate is typical under the aforementioned conditions. A decrease took place in the federation during the 12-month period, among other social-political communities the level was up 14 percent, among organizations of associated labor in social sector operations the rate amounted to 12 percent, and to approximately 5 percent among SI2 social sector operations. It has been emphasized that these movements were the result of measures taken to limit domestic demand which prevented too large of a flow of money going from the production sector into the non-production sector and among the general populace.

An analysis of the trends of money supply formation indicates that all basic trends had an effect on this moderate increase in money. Net domestic bank assets increased by 123.5 billion dinars for the first 6 months of the year, or by 4.5 percent compared to last December. Not included in this increase, however, are 460.8 billion dinars of securities representing exchange rate differences; this value has been expressed in nominal indices of net domestic assets because these securities did not arise as a result of bank credit activities, within the structure of net domestic assets, one notes that a somewhat larger increase was achieved in bank investments--these increased by 143 billion dinars, or by 6 percent, compared to December of last year--and that the remaining portion of net domestic assets decreased. Based on the first 6 months, it has been projected that the remaining net domestic assets will remain unchanged during the current period, and that bank investments will increase by 131.4 billion dinars. However, as the remaining net assets have been reduced by 20 billion dinars, the somewhat larger increase in bank investments over anticipated levels has not resulted in exceeding the planned growth targets of net assets as a whole.

## Long-term Investments More Restrained Than Short-term

The flow of money into non-monetary deposits (quasi money) reached a level of 81.8 billion dinars. This is an increase of 5.9 percent over the state of these deposits at the end of 1982, and an increase of 9.6 percent compared to the first 6 months of 1982. One observes that the increase of foreign deposits is lower than the year before, and the increase of foreign currency deposits is higher. Dinar deposits increased by 45.2 billion dinars, or, 6.3 percent, compared to December of last year. This rate of increase is half of what it was for the first 6 months of last year. Foreign currency deposits of the populace, and money in the foreign currency accounts of organizations of associated labor, were 36.6 billion dinars higher in the first half of this year, compared to a 28.2 billion dinar increase for the same period the previous year, but in relative indices this year, this increase was less than

for the 6 months of last year. These totals do not include the growth of foreign currency deposits which have come about by the change in the foreign exchange rate of the dinar, nor do they include the effects of inter-currency relationships of the most important foreign currencies. This means that they represent a real increase arising from current transactions.

On the whole, the increase in quasi money was somewhat over what had been expected, so that this increase, together with the more moderate growth of net domestic assets, affected the mild growth of the money supply more than had been anticipated.

The net foreign exchange obligations of banks to foreign countries increased by 17.1 billion dinars, which was close to the expected increase of 19.5 billion dinars. These securities which work to pull in the money supply are a real consequence, because changes in the exchange rate of the dinar were not calculated here.

Examining investments by time value, the trend for short-term investments to grow faster than long-term investments has continued this year. Short-term loans increased by 80.7 billion dinars, or by 12.2 percent since last December, while long-term loans increased by 67.6 billion dinars, or by 4.3 percent. Investments in securities decreased by 5.3 billion dinars, while for the same period last year they increased by 4.5 billion dinars. The most significant growth was achieved among organizations of associated labor--6.6 percent compared to last December. The greatest deviation compared to the same period last year was in loans to individuals, which grew at a rate 11.3 percent below that of last year.

9548

CSO: 2800/30



## PROS, CONS OF FOREIGN INVESTMENT WEIGHED

Zagreb START in Serbo-Croatian No 378, 16 Jul 83 pp 16-18

[Article by Mirjana Popovic: "Do We Need Foreign Capital?"]

[Text] All classes of foreigners are investing money in the Yugoslav economy. The laws are restrictive, and there are also ideological doubts as to whether foreign capitalists, by coming into our labor organizations, will disturb our fundamental decisions. In addition, examples are disregarded of enterprises which have grown to become large factories as a result of investment of foreign capital and have acquired incomparably greater power to develop socialist relationships and self-management.

A person trips over a stone, never over a mountain. And yet one such stone has been blocking our path for years, and only occasionally is it asked what this stone is doing there. This stone is the law on investment of the funds of foreigners in domestic associated labor organizations, a set of regulations which is so restrictive that it has become lifeless. Or rather it is highly effective if its purpose is to hamper investment of foreign capital in Yugoslavia, if we wish to use it to create the illusion that our sentiments are against self-sufficiency and at the same time have no trouble with investments simply because there are so few of them (investments) that we can say that they are virtually nonexistent.

At the beginning of this year there were formally 171 agreements on joint financial projects in force between Yugoslav and foreign partners. We say formally, since many of these agreements have not been put into effect or relate to such small undertakings that they are of virtually no importance to the economy. In essence when we speak of investment in our economy by foreigners, we are speaking of only 19 agreements. There are four agreements on investment in the basic chemical industry, three relating to investment in research on petroleum extraction, four in the production of transportation means, one in ferrous metallurgy, and one each in the production of food products and in the production of livestock feed.

The largest number of agreements on joint ventures have been concluded by Yugoslav businessmen and partners from countries in the EEC. The Federal Republic of Germany, with 51 agreements, is in first place. It is followed by partners from the United States with 22 agreements, from Great Britain with 17, and Italy with 16 agreements.

But the number of joint ventures agreed upon is one thing, and the amount of foreign funds committed quite another. Foreign partners invest chiefly financial resources in joint projects (53 percent of the cases), but also equipment (26 percent) and technology.

The greatest amount of stipulated funds introduced into a joint project is provided by partners from the United States (48 percent of all the funds introduced on the basis of an agreement on investment in domestic associated labor organizations by foreigners); next come the Swiss, who have invested slightly more than 14 percent of the total funds, and then businessmen of Great Britain, who account for 14 percent, firms from the Federal Republic of Germany bring in 8 percent, and those from Italy with 6 percent. The remainder has been invested by interested businessmen from 14 other industrially developed countries of the world, and 1 under an agreement with a CEMA member country.

Yugoslav and foreign businessmen have in the aggregate invested or agreed gradually to invest slightly less than 60 billion dinars in joint projects. According to Yugoslav regulations, a foreign partner can provide a maximum of 49 percent of invested funds. For the most part investors have not availed themselves of this option, and the share of foreign partners in total investments amounts on the average to slightly less than 26 percent. It is, of course, also not to our greatest advantage that in the majority of joint projects the investment provided by foreign businessmen is slightly less than 100 million dinars. It must be assumed that investment is made in joint projects because the domestic organization does not have the capability (primarily financial) to carry out a planned project itself. It can readily be seen that foreign businessmen want to invest in joint projects, that they are interested in such investment, but invest relatively modest amounts which serve the purpose of testing.

Most contracts with foreign partners have been concluded by organizations in the Socialist Republic of Serbia, 59 agreements on the basis of which foreigners have introduced funds amounting to about 6 billion dollars into Yugoslavia. The second in number of contracts concluded is the Socialist Republic of Slovenia, with 40 agreements and somewhat more than 1 billion dinars invested by foreign partners. It is followed by the Socialist Republic of Croatia with 33 agreements, but also with the highest total investment by foreigners, almost 6.5 billion dinars. Businessmen in the Socialist Republic of Bosnia and Herzegovina have concluded 27 agreements with foreign firms, thereby ensuring the influx of almost 1 billion dinars in investments, organizations in the Socialist Republic of Macedonia have concluded agreements on seven projects in which foreigners have invested slightly more than 200 million dinars, and foreigners have invested less than 500 million dinars in the economy of the Socialist Republic of Montenegro, on the basis of five joint projects on which agreement has been reached.

To judge by these figures, foreign businessmen have not been greatly interested in investing their funds in associated labor organizations in the less developed republics and regions (only two contracts, under which the total investment by foreigners is around 170 million dinars, have been concluded in the Socialist Autonomous Province of Kosovo). Analysis of the data also shows that foreigners have invested chiefly in the sectors of industry which have already been developed, such as production of transportation equipment, the metalworking and electric

industries, and production of chemical products, while investments in the timber industry or agriculture and in the raw materials base have been merely symbolic. This, after all, is not anything unusual, since the chief incentive for a foreign partner impelling him to embark upon joint investments in the first place is earning the highest possible profit, as well as the possibility of marketing technology and expanding his market in the country with which he enters into a joint project or in the markets of other countries. Consequently, he is interested in projects which ensure the highest profit possible accompanied by the smallest risk and, of course, ones which do so in the shortest possible time.

Over the period from 1968 to 1973, when the law on the resources of labor organizations was in effect, and in the following years (up to 1978), when investments by foreigners were regulated by the law on investment of the resources of foreigners in domestic associated labor organizations, on the average 15 new agreements were concluded each year. From 1979, when the law was amended, to the present time, agreement has been reached each year on 10 or 11 new projects in which a foreign partner has invested his funds and has shared in profits and risks. It is true that these figures apply only to partners from the OECD countries, but inasmuch as these countries have both financial resources and technology in which we are interested, the trend in question of decline in agreements is not inconsequential. Of course, it would be an exaggeration to seek the causes of this declining interest exclusively in the new law, since the economic troubles of recent years have also had an impact on investment activities and capabilities both of the most highly developed economies and ours (there is a difference only in intensity). Hence on the basis of frank statements by foreign businessmen and on the basis of observations by our experts, we will not be far wrong in saying that the new law has played the role observed of impeding joint investments. But despite the acknowledged and known deficiencies of this regulation, we cannot at all make up our minds what to do with it. Discussions have for a number of years been marked by a diversity of views, from the position that the law is a good one and that possibly all that is needed is to make it clearer, through the proposal that some parts of it be amended, to the opinion that a law with an entirely different text be drawn up. At the same time, efforts are in progress toward preparation of a bill amending and supplementing the law, and it is expected that one such result of 2 years of work will soon be submitted to the delegates to the Federal Parliament, but it is known even now that many open questions have not been properly answered in this document either.

In an attempt to simplify the legal regulations to the greatest extent possible, it could be said that the basic dilemmas revolve around three points: determination of the share of a foreign partner in the income earned by a domestic labor organization, the right of such a partner to participate in making decisions and in management of an organization in which he has invested his funds, and harmonization of Yugoslav laws and regulations.

Most of the criticism made is levelled at the share of a foreign investor in income earned. Foreign firms from the European Community and EFTA countries and from the United States have referred to this part of the law in writing and have pointed out that the existing solutions have been one of the main reasons why their interest in investing funds in the Yugoslav economy will continue to

decline in the future. They state that joint investments with us are not attractive to them because they do not yield suitable profit (which as a rule should be no less than interest earned), and at the same time that a foreign firm can exert no influence on profitability of operation because it performs exclusively an advisory function. The law instructs contracting parties that the main questions in future joint operations, income and income-sharing, are settled in advance by contract, sometimes for a great number of years. Often this cannot possibly be put into effect, especially when it is a question of prospecting ventures which can, but do not necessarily, yield results. It is also not made clear what is to be done when pooled funds are invested in the construction of new facilities, when there is no income while construction is in progress, while the law prescribes that the annual share in income must be calculated for an investor in advance.

It seems to us that another source of trouble is the fact that neither the Constitution of Yugoslavia nor the associated labor law provides the possibility of investment of the funds of foreigners in Yugoslav associated labor organizations, and some provisions of the current investment law and of the associated labor law, for example, may be interpreted as being in conflict. According to the law on investment of the funds of foreigners in domestic organizations, both profit and loss are matters to be covered by contract. According to the associated labor law, the question of income and loss is settled exclusively by the associated labor organization; and so forth.

But all this is not so complicated that correct solutions cannot be found for it, if only we knew exactly what we wanted. A dilemma is also posed by the very fact that a foreigner, a capitalist, invests his capital in our associated labor organization and on this basis acquires certain rights. Concern is also aroused by the circumstance that some major joint undertakings have not brought good fortune to our economy (petrochemicals, aluminum). To many separation of profit and income appears to be an insoluble problem, and they fear for the socialist and self-management essence of our system. There is also the criticism that by working as a team with foreign capital we are transformed into a technological and financial appendage of the West, and consequently also economically (but not merely economically) defined, and so forth.

Before we take a closer look at these fears and doubts, let us see how certain joint investments function in practice and what results they have yielded in several of our associated labor organizations.

The Yugoslav Vuteks factory, which is known throughout the world, at one time received an offer from a foreign customer for export of a million blankets. Vuteks replied that it did not have the technical capability and the facilities for undertaking such a large project. It would be able to do it if the foreigner would provide machinery and some reproduction material, while the Yugoslav partner would offer building, personnel, and know-how. The result was that equipment of a value of 2.1 million dollars came to the factory (without one cent of indebtedness) as an investment by the foreign partner. Vuteks discarded the antiquated, prewar, Miller machines from its production shops, is now working four shifts a day, and the foreign investor has the privilege of selling 1 million Yugoslav blankets, at world market prices, for a period of 7 years. A million



blankets are worth roughly 10 million dollars. The agreement concluded stipulates that the foreigner is entitled to a profit of 28 percent on the basis of investment of his resources and efforts in marketing on the foreign market.

It is interesting to compare this example with the experience of the also well known Yugoslav manufacturer of Virginia tobacco. This producer of first-class tobacco which for years has been in demand and highly esteemed throughout the world earns only about 6 million dollars a year. The reason is that the producer does not have suitable equipment for final processing (fermentation) and appropriate packaging of the tobacco, and this brings the manufacturer's price down 30 to 40 percent on the world market. The solution again lies in cooperation with a foreign partner.

Belisce in 1975 produced about 15,000 tons of cellulose, 20,000 tons of paper, and about 20,000 tons of packing materials. The low level of capital accumulation by the organization, the lack of material incentives, and the financial inability of domestic banks to assist it forced Belisce to establish connections with foreign firms. Several well-known firms were involved (Siemens, Bako, fest, FEST-Alpina in Austria, and certain firms in the Federal Republic of Germany), and a German-Austrian consortium was formed. New facilities will begin production this year and will turn out 130,000 tons of cellulose, 200,000 tons of paper, and 70,000 to 80,000 tons of packaging materials. Belisce has built its own 35-megawatt power plant, which has a thermal energy of 250 tons per hour, and has a complete infrastructure.

The foreign partner invested his capital in this project, and in recent years has reinvested; Belisce has invested, among other things, its technology, but admits that the foreigners have brought into the joint project something which is otherwise difficult to obtain with money: an understanding of operational efficiency, precision in discharging obligations assumed, honoring contracts, and so forth. Another detail: the investment project, which the foreigners estimated would take 2 years to complete, will be finished before this year is out.

The interest of the domestic partner is clear, but what has the foreign investor achieved? This example shows that when he invests in a good long-term project, a project which has a future, the capitalist is willing to accept a more modest profit than we usually think he will. There were years, while a project was under construction, when the profit rate of the foreign partner was zero or only 0.5 percent, and there were years when this rate amounted to 5.5 percent, but there were also years when the rate was 20 and 30 percent. On the average for the entire period it amounted to 11.8 percent. If we compare this with the interest we pay on foreign financial credit, and if we take into account the extremely important detail that in foreign investments the foreign partner also shares in the risk, as we witness the unscrupulous behavior of finance capital, which does not shrink from the plunder of collecting the price of its money, then we probably arrive at the true nature of joint investments in the Yugoslav economy. These investments involve sharing in profit, but also sharing in risk if funds are not properly invested.



In our concern that by entering our labor organization the capitalist will warp the fundamental orientation of society, we have forgotten at least two facts, the first of which is that our self-management system and socialism have too many roots to be endangered by so simple a threat. (After all, we have very strong defensive mechanisms about which foreigners have nothing to say: for instance, not a single decision by a management committee including foreign investors as members is fully valid until it has been approved by the workers' council and by our administrative authorities.) The second is that organizations such as Vuteks, Belisce, and the like which have become economically sounder as a result of investment of foreign capital have a far greater ability also to develop socialist relationships and self-management than, say, our domestic nonprofitmaking organizations and those which are barely managing to survive.

It is also true that we have had bitter experiences with investments by foreigners in our economy. But once again a clear-cut determination must be made of how much it is of our decisionmaking and investment system. A careful analysis should also be made to determine why our banks exert such feverish efforts against joint investments, while it is their function to receive and redistribute foreign financial credit. One question remains to be answered: Why is it that for years our main goal and the motive force of our economic processes has been effort to assure the greatest possible investment in new facilities rather than in production and earning of income, and accordingly penetration of the world market. Even now, in this truly difficult situation, when we must sell for dollars both what is not profitable for us to sell and what we ourselves need, some people concern themselves with counterfelt dilemmas: they vacillate between vaguely conceived priorities (which they say may one day make us happy) and an export orientation, which unavoidably contains priorities of its own, since in our poverty we must concentrate all available resources (both material and human) on a few key points.

Does the investment of foreign capital in the Yugoslav economy threaten to transform us into a technological appendage of the West? Is it forcing us into economic dependence? It is the easiest to answer these questions with a counter-question: What happiness has been brought to us by economic independence and what happiness by the finance capital which for years has been coming into the country through the front door (not through the side door represented by associated labor organizations)?

We have not availed ourselves of the potential contained in investment of foreign funds in the Yugoslav economy on the basis of sharing in income but also that of sharing in risk. Experience has shown that we too can derive benefit from this form of association, as well as from long-term cooperation in production (which is a special form of cooperation with foreign businessmen), and it is logical then for the other person cooperating in a project to benefit from it. Experience has also shown that this is much more favorable for our development than the purchase of licenses and patents, when the foreign partner is interested merely in selling us what he no longer needs and in protecting himself against possible competition. But where and how we will enter into long-term projects and what the effect on our overall development will be and what we wish to achieve, these are problems for us to solve.

BOSNIA-HERCEGOVINA FOREIGN TRADE

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 30 Sep 83 p 6

[Article by M. Mirnic: "Above Average For Yugoslavia; Bosnia-Hercegovina's Economic Relations With Foreign Countries"]

[Text] Increased exports and reduced imports have improved the republic's foreign exchange balance, enabling it to meet obligations to foreign partners in a more timely manner. All fixed and guaranteed obligations regarding foreign credits have been satisfied, and the total trade deficit with foreign countries has been reduced.

Despite rather acute difficulties in overall economic relations with foreign countries, significant results are being achieved in Bosnia-Hercegovina's export levels this year, especially those to the convertible currency sector, the growth of which has reached the planned level of 20 percent. Total imports have been reduced, which means that the foreign exchange balance of the republic is improving, and this allows foreign obligations to be settled in a more timely manner.

These assessments are confirmed by specific data. Total export of goods, for example, is 4 percent higher for the first 8 months of this year than for the same period last year (0.3 percent higher for Yugoslavia); within this structure, exports to the convertible currency segment are 20.1 percent higher (15.1 percent for Yugoslavia). True, export of goods to the payments area decreased by 11.7 percent in the corresponding period. At the same time, total import of goods decreased by 14 percent; imports decreased by 15.3 percent from the convertible currency market and by 11.7 from the clearing market. Also observable in the import structure is the fact that the import of raw materials and semifinished products from the convertible currency sector decreased by 16.8 percent, the import of equipment by 14.6 percent, and that consumer goods imports increased by 20.4 percent from this same segment.

However, the import of goods is not only at a lower level than for last year, but also compared to the dynamics established for this year; above all, this is because of the shortage of foreign currency (especially for imports from the convertible currency market).

The total foreign trade deficit is being reduced; it amounted to approximately \$96 million for the first 8 months of this year, which was 43.2 percent below the level for the same period last year. The deficit decreased by approximately \$128 million, or by 62.2 percent, to the convertible currency sector. The outstanding level of reduction of the deficit to this market is primarily the result, according to informed sources, of the significant reduction in total imports, as well as because of increased exports to this currency market.

#### Lagging Foreign Currency Income From Exports

Businessmen from this republic--and they are not alone--are particularly worried about the lagging foreign currency income from the export of goods and services to the convertible currency segment. Income amounted to \$314 million for the first 7 months of this year (administered through Bosnia-Herzegovina banks), and this figure is 33.2 percent below income realized for the same period last year. At the same time, gross foreign currency income taken in from advance payments for construction projects abroad totaled \$120 million, or just 40 percent of what was realized for the same period last year.

The most important reasons for the decreased foreign currency income are the delay in payment of claims from some developing countries, and the large number of jobs which are performed on a compensation basis. Also, net foreign currency income based on workers' foreign currency money orders has decreased.

The lagging of foreign currency income in almost all areas in comparison to what had been expected reduced, of course, the level of foreign currency liquidity. This is especially true bearing in mind that the reserves based on the temporary use of funds from advance payments dependent on completion of construction work abroad has been exhausted.

#### All Fixed and Guaranteed Obligations Satisfied

Foreign currency liquidity is also aggravated by the untimely contracting and utilization of foreign trade credits. Indeed, according to data through the middle of August, organizations of associated labor from regions of this republic had not concluded any trade credits based on new credit arrangements before this time. This is said to be due to difficulties which have appeared in substantiating conditions for their utilization. Otherwise, besides the package of credit arrangements, basic organizations of associated labor contracted and registered with the National Bank of Bosnia-Herzegovina during the first 7 months of this year trade credits totaling \$70.7 million for the import of semifinished products from the convertible currency sector. The credits were mostly used for the import of wheat, soybeans, and coking coal.

At a recent meeting of the Parliament of the Bosnia-Herzegovina Economic Council, it was stated that the late payment of foreign currency income to organizations of associated labor were putting banks into a situation in which they would not be able to meet their own maturing obligations to foreign countries. Therefore, the delegates of the council indicated that (in order to

revive production for exports, and in connection with this, to bridge the uneven dynamics between individual income and outflow of foreign currency) the export economy ought to utilize foreign trade credits for the import of semifinished products and raw materials to the greatest extent possible.

It is worth emphasizing, however, that in spite of the difficulties mentioned above, all fixed and guaranteed obligations regarding foreign credits which were due by the middle of August of this year have been satisfied on time in Bosnia-Herzegovina. In the same vein, republic banks have settled accounts of foreign currency income set aside in special accounts at the National Bank of Yugoslavia, according to all sources, for an amount totaling \$70.8 million through the end of August.

All in all, the interwoven currents in the total economic relations with foreign countries for the first 8 months of this year indicate that difficulties will continue to emerge and even intensify in the import supply of current production with the necessary materials for reproduction, with spare parts, and with some raw materials. Thus, the fear is justified that these difficulties will influence realization of the expected volume of production, and for these reasons, other economic indices as well.

Therefore, the Bosnia-Herzegovina Executive Council has indicated quite reasonably that, in order to create conditions for the import of the necessary materials, an acceleration of the payments based on the export of goods and services might be required, along with the understanding that it is possible for claims to be effectively compensated with naptha contracted for and possibly with new imports of naptha. Similarly, the council has also assessed that it is necessary to accelerate the utilization of foreign trade credits for the import of material for reproduction to be used for production intended for export. This would be either in a direct manner or in a production connection with other organizations of associated labor. It is apparent that the issues have been identified, the possible ways of resolving or mitigating them surveyed, and in this regard activities have been stepped up in almost all authorized structures, from work organizations to the highest republic institutes, and it is logical to expect results in this important and responsible manner.

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## YUGOSLAV TRADE, ECONOMIC COOPERATION WITH HUNGARY

## Cooperation Preserves Good Relations

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 29 Sep 83 p 7

[Article by A. Petrović]

[Text] Economic cooperation makes up 40 percent of total commerce between the two countries and is the most stable part of the cooperation between them. Good conditions exist for solution of remaining problems related to payments for services on both sides.

This year's trade with neighboring Hungary has shown that efforts being made by both partners in recent years to eliminate difficulties have not been without success. It has not been long since Yugoslav trade with the Hungarian economy was among the least successful in the scope of the socialist countries who are members of CEMA. Now that is different: it is among those that are successful and constantly growing, with ever better satisfaction of the needs and interests of both partners.

Agreements on long-term production collaboration have been shown to be the "guardian" of good economic relations in a time when things are not going well for the world economy. These ties offer security in commerce in goods and regular supplies of necessary semimanufactured materials for industry. About 40 percent of total trade between Yugoslavia and Hungary is based on such agreements, but it is also worth noting that a large number of these agreements have been concluded in recent years, and this has had a beneficial impact on the quality of commerce.

Cooperation in the production of highway vehicles is traditional. In this exchange the Yugoslav side provides designs, spare parts and other appropriate goods, while Hungary supplies finished trucks and designs for heavy trucks. Since last year, this area has been enriched with new, very significant agreements on cooperation in the production of passenger cars. Hungary is one of the very few countries that does not have its own automobile industry and that for the present does not intend to develop one, yet which imports 100,000 cars annually. These needs are satisfied by cooperation, in which the Crvena Zastava plant in Kragujevac will now be included. So far automobiles



worth about 10 million dollars have been delivered, and preparations are under way for joint productions in which the producer in Kragujevac will take delivery of some parts from Hungary, and will deliver complete automobiles. It is believed that this cooperation has a promising future, since the needs of the Hungarian market for cars have not been satisfied.

Another large collaborative undertaking is in the chemical industry, where total deliveries in both directions total 280,000 tons of mineral fertilizers. For both countries, which have strong agricultural orientations in their economies, this exchange is of vital importance. An agreement called "wood and cellulose" is also one of the "classics" of such collaboration: Hungary supplies wood, and Yugoslavia provides that country with finished cellulose materials, for a total annual trade worth 50 million dollars.

These and similar agreements have a significant role in economic cooperation between these two neighboring countries, for they satisfy needs for certain important products. The situation would be even more favorable if other exchanges of goods were more developed, and could satisfy additional demands, for trade through cooperation or other forms of bound exchange agreements alone cannot satisfy the partners' needs entirely. Nevertheless, this year's trade has brought considerable positive results in comparison to last year's, for it has shown more balance and less advantage on the Yugoslav side, according to data for the first 8 months.

In the structure of exports and imports with Hungary, raw and semimanufactured materials remain in first place, accounting for about 60 percent of the total by volume. Machines and equipment take second place with about 23 percent, followed by consumer goods, where the Yugoslav share is 15 percent and Hungarian exports account for a little more than 4 percent.

#### Commerce Develops Well

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 27 Sep 83 p 1

**[Text]** Belgrade, September. Trade with Hungary in the first 8 months show that Yugoslav exports to that country have totaled 178.4 million dollars, or 22.7 percent more than for the same period last year, while imports totaled 168.9 million dollars, or an increase of 16.5 percent. Total exchange in goods grew by 19.6 percent over the first 8 months last year, giving hope that the anticipated volume of 580 million dollars would be reached.

Other indicators concerning this cooperation are also favorable: imports exceeded exports by 5.6 percent, and a short-term surplus of 9.5 million dollars has been accumulated. The annual plan has been 61.1 percent fulfilled, with exports at 61.7 and imports at 60.5 percent of the annual projection.

Delegates in the section of the Yugoslav Economic Chamber for relations with Hungary have also been negotiating agreements on trade for 1984, as well as on participation in the coming session of the mixed committee that will be held in Belgrade on 3-6 October, during the celebration of the Day of Hungarian Economy and Culture in Belgrade, Sarajevo and Skopje. They also agreed on participation in the meeting of the presidium of the Yugoslav Economic Chamber section and the corresponding Hungarian section of economists, which will be held in Budapest 14-16 November.

## FIGURES ON PUBLIC, PRIVATE SMALL BUSINESS ESTABLISHMENTS

Belgrade KOMUNA in Serbo-Croatian Sep 83 pp 15-22

[Article by Nenad Stankovic: "Basic Strategy for Development of the Small Business Sector in the Light of the Long-Range Economic Stabilization Program"]

[Excerpts] On the basis of the criteria contained in the Social Compact on Development of Small Business in Yugoslavia, it has been ascertained that in 1982 there were 2,526 organizations of associated labor in the small business sector, 104 of them contract organizations of associated labor and 256 of them cooperatives in the crafts and trades. In that same year 189,145 private establishments were recorded in the small business sector.

In 1982 our country's small business employed a labor force of more than 500,000, which constitutes about 9 percent of the country's total employment. Gross income in these activities amounted to only 6.5 percent. The total labor force in the small business sector is distributed 60 percent in private activities and 40 percent in associated labor.

Table 1. Survey of Small Business Organizations and of Persons Employed in Them by Republics and Provinces

<u>Republics and Provinces</u>	<u>Number of Organizations</u>	<u>Number of Employees</u>
SFR Yugoslavia	2,516	198,501
SR [Socialist Republic] Bosnia-Herzegovina	175	14,963
SR Montenegro	53	2,698
SR Croatia	529	44,307
SR Macedonia	368	36,264
SR Slovenia	421	27,202
SR Serbia (proper)	546	48,537
SAP [Socialist Autonomous Province] Kosovo	34	2,528
SAP Vojvodina	280	20,002

Small business has attained a differing level of development from one socialist republic or socialist autonomous province to another. The lowest share of small business in the total economy, based on the size of the labor force,

is in Kosovo, where it is only 1.95 percent, and highest in Macedonia, where it is 10.25 percent. In Slovenia, which is thought to have the most advanced small business sector in qualitative terms, the number of employees in the small business sector represents 4.22 percent of the total labor force in Slovenia's organizations of associated labor.

In 1982 there was a labor force of 198,501 in our country's small business organizations of associated labor. The average number of employees per small business organization was 79, while in the socialized economy as a whole it was 160. Taken by republics and provinces, the number of employees in the average small business organization of associated labor ranged from 99 in SR Macedonia to 51 in SR Montenegro.

In 1982 there were a total of 199,641 establishments in the small business activities of the private sector of economic activity in our country. Of this total 135,760 were establishments in the crafts and trades, 1,290 were commercial establishments, 16,486 were in the hostelry sector, and there were 46,105 common carriers.

Aside from proprietors of establishments, these private activities employed a total of 98,310 employees, as follows:

In private craft and trade establishments	77,579
In private hostelry establishments	19,315
In private commercial establishments	448
Employed by common carriers in the private sector	968

In recent years there has been intensified activity in certain opstinas toward creating more favorable conditions for development of private small business activities, and new private establishments did open at a faster rate. However, those predominantly being opened are small hostelry establishments, and then groceries, establishments offering the services of construction machines, and to a far less extent are they in the service sector of small business for which the working people and the public have the greatest need.

#### Possibilities and Necessity of the Faster Socioeconomic Development of the Small Business Sector

Present-day technological and technical development cannot be based solely on production in large-scale industrial plants, but must objectively rely on smaller facilities, on their industrial cooperation, and, in our context, on their association and linkage through income sharing as well. A large number of our industrial plants are still burdened with products which from the economic and technological standpoint would be more optimally manufactured in smaller organizations.

Not only does development of the small business sector create new jobs, but by taking over certain production programs from large organizations of associated labor, it also opens up room for them to operate more productively, to increase the use of those already employed. The advantage of the small

business sector lies in the fact that it affords the possibility of more rapid reorientation toward the products demanded by the present-day market. Its development also requires smaller investments, which yield higher income per job than investments in industry.

The average investment to create a new job in small business is about 300,000 dinars. This means that with the same capital small business can open up about fivefold more jobs than can, say, the manufacturing branches of industry, where the investments per job are considerably higher and amount to more than 1.5 million dinars. When we also add to this the fact that small business is developing predominantly in communities where the conditions already exist for the workers' life, then total investments per job appear to be still more justified in this case.

The experiences of certain highly developed industrial countries indicate that small business is an inevitable and logical companion of the total productive forces, especially as those productive forces enter the phase of a moderately and very high level of development. In West Germany, for example, one out of every three industrial workers is employed in an enterprise with a labor force of less than 200 people, or, in the United States, over the past decade about 90 percent of all new jobs have been opened in enterprises employing fewer than 250 workers. In Japan, which is the leader in this regard, more than 50 percent of the labor force of the entire economy is employed in small business.

There is no dispute that the greatest potential and need for development of small business lie in associated labor itself, but the results to date have been unsatisfactory. There are still a fair number of large production systems and organizations of associated labor in industry which are not showing themselves to be vehicles for development of this type of productive facility even though a considerable portion of their production is burdened with products that by many criteria are more suitable to small business.

The examples of a number of organizations of associated labor which have dropped from their manufacturing process a number of products unprofitable for them, but which are very interesting and profitable for production in small business, also show that quite a bit can be done in this direction. Under the quite difficult economic conditions and especially difficult conditions for obtaining certain imported products, certain work organizations have shown a greater interest in collaborating with the facilities of small business through industrial cooperation and by turning over to them certain products in their own production program. Thus the work organization "Javor" of Ivanjica has built several small production facilities in rural areas, while the work organization "Gosa" of Smederevska Palanka, the "Crvena Zastava" Plants of Kragujevac and El-Nis [Electronics Industry of Nis] have built service centers and small shops for making spare parts. Others which have distinguished themselves include the work organizations "Mebla," "Gorenje," "Iskra," "Simplo," "Rade Koncar," "Slobodan Penecic-Krcun," UNIS and other work organizations which are more and more turning over certain jobs in their programs to organizations of associated labor in the small business sector and to private activities in the small business sector.

However, there are still not enough organizations of associated labor collaborating with the small business sector. Changing these relations requires a broader involvement of workers in associated labor and direct producers, self-management bodies, trade unions and others. There has to be a change in the practice up to now of making decisions on these matters within small professional management groups.

The fact is that the small business sector is very suitable for mobilizing the capital of individuals for productive purposes. Yugoslavs temporarily employed in the countries of western Europe are showing a particular interest in this. Many of them see self-employment in one of the small business activities to be their way of making a living. That is why sociopolitical communities, work organizations, economic chambers, commercial banks and other interested entities need to provide appropriate programs in all activities of small business, agriculture, tourism and the like.

Small business, then, is not a type of economic activity which has been superseded and in which it is not profitable to invest or to depend on for people's existence, but rather this is a form of economic activity that meets new needs and is suitable to new products, new processes and new tendencies in the organization of production and it is necessary to every advanced economy, indeed even one which is structurally balanced. In that sense its development has a lasting relevance and should not be associated solely with the present economic situation, but should be viewed as an organic part of the entire economy and a need in its development.

It is a fact that small business can and should develop only within the framework of overall economic development, and especially in the framework of the technical and technological development of large-scale organizations of associated labor. The development of industrial production and of an ever broader assortment of products, production specialization and industrial cooperation demand that small business adapt to new needs.

The collaboration of small business and large-scale organizations of associated labor is also indirectly manifested in the fact that small business can satisfy the market's demands for goods which otherwise would have to be furnished by some larger work organization. Since these are consumer goods whose production industry is not interested in because the production runs are not economically efficient, this is where small business has a great opportunity.

In coming years small business in our country should develop at an average annual rate of 8 percent according to the development plans. This increase would basically depend on growing demand for modern appliances and equipment and their ever greater presence in households, as well as upon better conditions and use of an ever greater number of motor vehicles. The needs of associated labor for small business are also growing more and more every year.



## The Demand for the Products and Services of Small Business Is Growing Steadily

According to figures of the Bureau for Market Research in Zagreb, almost one out of every three households in Yugoslavia today has an automobile. But it is very interesting to see how the number of automobiles and TV subscribers has increased over the last 15 years in the country as a whole and by republics and provinces.

Table 2

Republics and Provinces	Number of Households Per Passenger Vehicle		Number of Households Per TV Subscriber	
	1965	1980	1965	1980
SR Bosnia-Herzegovina	55	5	14	2
SR Montenegro	40	4	14	2
SR Croatia	27	3	7	1
SR Macedonia	27	3	9	1
SR Slovenia	9	2	5	1
SR Serbia	35	4	9	2
Serbia proper	32	4	9	1
SAP Kosovo	35	5	25	2
SAP Vojvodina	38	4	9	1
SFRY	35	3	12	2

The development of small business has been uneven in the past and has lagged behind the development of other sectors of the economy and behind the growth of demand for products and services. There are several reasons for this.

To illustrate, we will note that 87 percent of the households in Yugoslavia possess refrigerators, 90 percent radios, 80 percent washing machines, 78 percent vacuum cleaners. Or, 70 percent of housing units have hot-water heaters, 55 percent sewing machines, while 40 percent of the households have telephones. More than 35 percent of the households have freezers, and then 20 percent have a tractor, and 10 percent have weekend cottages.

We will make certain other comparisons. In 1982 our country's small business sector employed a total labor force of more than 500,000. That means that we had 210 workers in the small business sector for every 10,000 employees in the total labor force. That same year there were 850 workers in small business for every 10,000 members of the West German labor force, in Italy 700, and in France 760. These figures certainly indicate the great potential of small business with respect to creating new jobs.

There is obviously room in our country for development of small business, beginning with the manufacturing of parts and components for industry, supplementing the assortment of large-series production, the manufacturing of consumer goods, souvenirs, toys, sporting equipment and the processing of waste, and all the way to rendering the most diverse and up-to-date services, among

which the greatest demand is for maintenance of appliances and equipment in the household and in associated labor, as well as for garages to service and maintain motor vehicles.

Table 3. Number of Durable Consumer Goods, in total number of units

<u>Item</u>	<u>1975</u>	<u>1980</u>
Automobiles	1,500,000	2,800,000
Motorcycles and mopeds	4,350,000	5,500,000
Television sets	3,100,000	5,000,000
Electric ranges	4,100,000	6,500,000
Refrigerators	4,200,000	6,200,000
Washing machines	2,500,000	4,300,000

#### Causes of the Relative Lag in Development of the Small Business Sector

In spite of the social commitments universally adopted concerning the importance of small business and the needs and possibilities for its more rapid development, in practice there has been vacillation and differing views on these matters, and that means that the results have also been diminished, and these are the reasons why:

i. inconsistent enforcement of the constitution and Law on Associated Labor and failure to implement in practice the commitments of the Social Compact on the Basis of the Joint Effort To Implement the Policy on Development of Small Business in the SFRY;

ii. a sectarian attitude toward the small business sector as a whole, especially towards private activities, because of confused ideological conceptions and dogmatic views concerning development of self-employment;

iii. the lack of a policy concerning development of small business covering a period of any length in a large number of opstinas and the consequent absence of plans and specific programs based on such a policy, especially in local communities;

iv. insufficient commitment of workers in the larger organizations of associated labor to adopt self-management decisions establishing new small business organizations and collaborating more extensively with existing ones and thus restructuring production more easily, increasing their own income and employment, labor productivity and standard of living;

v. neglect of the importance and need to establish contract organizations of associated labor and to develop cooperatives as forms whereby personal labor is linked together and grows to become associated labor, that is, as a specific form of socialization of the capital and activities of small business;

vi. an inappropriate economic policy (credit policy, customs policy, fiscal policy and the policy governing contributions), which has not encouraged the development of small business through its measures and has not seen that

small business develop to a greater extent with the capital of workers returning from abroad;

vii. inflexibility of the system of targeted education, especially the range and teaching in the practical arts, in adapting to the requirements and needs of small business, especially certain service activities and crafts and trades which have a lengthy tradition.

Aside from these causes, the relative lag in development of small business has also been affected by the massive emergence of unlicensed operation. The many years in which young people were oriented toward nonproduction occupations, and also the inappropriate and prolonged schooling of personnel in targeted education, without adequate practical work, have created a shortage of most of the craft and trade occupations and especially fitters, plumbers and electricians and the building trades, as well as occupations involved in repairing and maintaining industrially produced durable consumer goods.

That is why workers in these occupations easily find a job in associated labor, and in their off hours they render services as craftsmen and tradesmen doing maintenance and repairs, as fitters, electricians and plumbers, and in the building trades, which they do without a license either on their own or through private craftsmen and tradesmen, and it is also done as a registered second job in off hours. This type of work affords a larger income, involves no business risk or investment of one's own capital, and at the same time there are no tax obligations or other obligations to the community.

#### The Huge Scale of Unlicensed Work and Its Harmful Consequences for the Small Business Sector and for Associated Labor as a Whole

That is why in recent years unlicensed operation has reached enormous proportions in rendering craft and trade services of repair and maintenance and also heating, plumbing and wiring installation and the building trades. In it one finds industrial, craft and trade and construction workers from industry, the construction sector and other sectors of the economy, technicians and engineers, pensioners, farmers, housewives, university students and unemployed persons. This situation has above all been facilitated by the inappropriate development policy and the absence of incentives for development of small business. The shortage of service facilities and facilities for finishing work in construction in both associated labor and self-employment has also resulted in expansion of unlicensed work, and this has been favored by the inadequate and ineffective enforcement, the absence of penalties, as well as the low fines for offenders and the like.

The spread of unlicensed operation has had an adverse effect on creation of jobs in small business, both associated labor and self-employment, so that on the average only one out of every two private craft and trade establishments employs a worker.

Unlicensed operation not only impedes the development of small business, but also inflicts great harm on organizations in which these workers are employed. Usually they are not motivated to make a greater or more productive commitment

In their own work organization, they are undisciplined, often they are absent from work without justification or they take advantage of sick leave, and during that time they carry out various activities on their own account without a license. This work of theirs also involves use of supplies and tools of the work organization for private purposes. It is not uncommon for workers employed in service organizations in the socialized sector of small business to figure as unfair competitors of their own work organization, from which they take over customers to whom they render services in the afternoon without a license, very often with the materials, parts, and even tools taken from their own organization of associated labor.

Because of the ever greater personal interest of workers in unlicensed work in the afternoon, many service organizations have not been able and are not now able to organize operation on a second shift and on Saturday, which they normally would do and which would be in the interest of many consumers.

It will take more than closer surveillance, penalties and higher fines to suppress unlicensed operation. There will also have to be changes in legislation on employment relations to make it possible for work organizations to eliminate more successfully cases of this kind in their own workplace and to force workers to commit themselves either to associated labor or to self-employment.

The complicated and lengthy procedure of obtaining licenses, difficulties related to obtaining space for an establishment, the bureaucratic attitude of the staff services of housing assemblies which plan and approve performance of the various small business activities, as well as certain other shortcomings in the work of the staff services of self-managed organizations and communities whose attitude toward small business and its activities are crucial to its development—all of this contributes to the slower development of small business.

There is a need to define more precisely the forces which will develop small business and stimulate those carrying on that development. The point of departure in this must be that development of small business is a need of associated labor as a whole.

Those who directly and principally possess the rights, duties and responsibilities for the situation and development in small business should above all be the workers in organizations of associated labor in the socialized sector of small business and self-employed persons on the one hand, and workers and their production, commercial and other organizations of associated labor on the other (in the sectors of industry, trade, construction, and so on) who have concentrated in their hands large economic resources and trained people.

Among the principal entities responsible for development of small business, the large producers have a special role; at present they are little or not at all involved in its development. The principal motive which large producers have in development of various forms of small business is manifested in the need to utilize and raise the labor productivity of the large-scale economy and on that basis realize high income and fit into the world division of labor more easily.

If small business is to be able to develop, it needs public support in the training of personnel. The system of targeted education should be improved in the direction of imparting to those who will be workers in activities in small business a greater practical competence. Also, workers who have acquired a certain experience, but do not have formal academic qualifications, should be allowed to open establishments of their own. This is especially important to many workers returning from abroad.

An essential condition for invigorating small business, especially that segment based on self-employment, is changing the ideological conceptions that prevail and altering their influence on development of this activity.

Our constitutional system has afforded a relatively broad framework for self-employment, and clearing up ideological misconceptions would contribute to consistent realization of that constitutional conception.

Today we rather easily proclaim relations to be capitalistic when they are not. It is obvious, however, that self-employment, family work and small-scale commodity production cannot threaten our socialist development, but can only enrich it.

The need for stronger development of small business, both in the socialized sector and through self-employment, is quite obvious, but it is having very little going. The awareness and conviction that all public factors should commit themselves to removing the obstacles require a consistent campaign by the subjective forces at all levels of society to overcome the lack of understanding, underestimation or even fear of small business. This is especially pronounced when it comes to opening private stores, workshops rendering services, appliance and equipment maintenance and repair shops, and so on. We are obviously dealing here with certain ideological prejudices concerning small business so that it is underestimated in the socialized sector. In many opstinas and communities the belief is still prevalent that only large-scale production and large work organizations are changing the inherited backwardness of the economy and that only in them are high employment, high national income and the like achieved overnight. In actuality, without disputing the need for construction of large facilities when the technology and nature of production so require, experience is showing exactly the opposite—that only a large number of medium-sized and small specialized organizations afford faster creation of new jobs, complement the production of large plants or in part share in it, and certainly they essentially improve its profitability, the level of development of its production, and they make it easier for it to adapt successfully to market changes and changes in technology.

However, likewise when we speak of the importance of small business we should not foster an illusion that by developing it one can solve all or most of the problems of economic stability in a country, including our own. Especially since our own instability has in part occurred because of corresponding disturbances in economic relations in the world. One thing is certain, that a deliberate action and effort on the part of everyone can mitigate at least some of these adverse consequences.

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## PRIVATE MEDICAL PRACTICE IN CROATIA

Belgrade BORBA in Serbo-Croatian 23 Sep 83 p 4

[Article by T Bohug]

[Text] The question is being raised again as to whether private practices are needed. If the answer is affirmative, it will not be necessary to pass a law on their elimination.

Zagreb, September. The debate on private medical practice will soon be on the agenda again in parliament councils and social advisory bodies of Croatia. Although both will be talking about the same topic, their tasks will be completely different.

The delegates at parliament councils will consider a draft proposal of a law that would provide for the manner and conditions for bringing physicians now involved in private practice into the social health sector. (This draft has been sent to the parliament for final consideration in recent days.) This would at the same time mean the closing of private medical facilities by mid-March of 1985, as provided for in the republic law on health protection and maintenance that took effect at the beginning of 1980.

## Arguments and "Arguments"

The delegates of social advisory councils will again be asked whether we need private medical practices or not. If they answer that question affirmatively, then we will need no legal regulation to deal with their elimination, so that certainly the debate on the brief law with but seven provisions for carrying out this process will become unnecessary.

This arouses an interesting debate about a good old topic that always has many interested participants. That was seen last year when the debate on private medical practice was initiated in this newspaper on the pages of the "Tribune" section by letters from many writers, chiefly physicians who were engaged in private practice either legally or in unofficially legalized illegality. All of them presented reasons why, in their opinion, we should continue the tenure of private medical practice, which has existed for 100 years in Croatia, and why we should make it possible to open private medical practices in other areas.

Judging from everything, there seems to be little chance of that happening, for the kind of news that could affect such a decision comes from life itself, from the material shortcomings of the health services themselves and from the health insurance organizations at the moment when the regulations for eliminating private medical practices are approved.

The documentation that accompanies the indicated little law on including physicians in private practice in the social sector includes well-known old arguments and "arguments" that can serve as well "for" as "against" private medical practices.

Too High a "Deery"

The justification gives data indicating that the health services have a shortage of dental care, and that according to accepted standards it is short 215 teams of stomatologists, or more than there are of such teams (192.7). Stomatologists and dentists make up the greatest number of health workers who conduct private practice, so that they and their equipment would be welcome indeed at the health centers.

But it is hard not to ask whether that is an argument for employing physicians from private practice in the social health care system, or is it really a matter of employing those who are already well employed, and would it not be a better and more convincing argument for hiring unemployed physicians, of which 494 are on the lists of the employment offices. Of these 292 are stomatologists, and we know that they are not unemployed because of somebody's obstinacy.

On the other hand, those in private practice justify their work as a supplement to public health services, and the only possibility for truly free selection of physicians.

They too should be asked, if the aim is to supplement public health services, why they do not supplement it where it is weakest. Specifically, of 259 private medical practices, not one has been established in the opstina of Gospic. There are none of them in any of the places where the ratio of physicians per capita is the worst. The private medical practices hold their ground in the most highly developed centers. The center of Zagreb has 68, while the opstinas of Trnje, Zapresic and Sesveta have none at all.

We will not even attempt to guess how the debate on private medical practice and the law on its elimination will go. Nevertheless, we expect that the crucial argument affecting the decision will be the huge loss of health services and the self-management interest communities for health protection, which according to estimates will reach 10 billion dinars by year's end.

17/11

CSG: 2800/11

## HORVAT URGES OOUR REFORM

Belgrade GLEDISTA in Serbo-Croatian No 9-12 (Sep-Dec) 82 pp 125-131

[Article by Branko Horvat: "The Case for Reforming the Basic Organization of Associated Labor (OOUR)"; this 9-12/82 issue was published in September 1983]

[Text] The constitution envisages the enterprise--referred to in the constitutional terminology as the "work organization"--as the principal economic entity. The Law on Associated Labor has in this regard overstepped the bounds of the constitution, since it has made the plant (pogon)--referred to in the terminology of the ZUR [Law on Associated Labor] as the "basic organization of associated labor"--the business entity, granting it a giro account and making it a juridical person. Experience has exploited the ZUR in the direction of extreme solutions, especially as a consequence of local political pressures: the OOUR, that is, the plant, has become an enterprise. This has had catastrophic consequences for the Yugoslav economy: economic efficiency has dropped off drastically, self-management has gone backwards, and the enterprise has been broken up.

In spite of the terms used in the legal documents, in the discussion below I will use the term "enterprise," and that for two reasons: this is a term which in economic theory has a precisely established meaning which cannot be altered by any sort of amendments of legal regulations, and aside from that the term "work organization" is a linguistic monster from the standpoint of the languages of Yugoslavia (for example, one of the principal subjects taught in schools of economics has to be titled "The Business Operation and Organization of Work Organizations"!)). What I mean by the enterprise is a self-managing community of production plants and administrative departments which has the status of a juridical person and makes all its basic economic decisions autonomously. These three attributes make the enterprise the principal economic entity.

The consequences of OOUR-ization are adverse, and, as already pointed out, can be reduced to these three:

1. Drop in Economic Efficiency. This effect is well known and it is enough just to record it. Unproductive manpower has grown (new directors, secretaries, accountants, and so on); administrative costs have risen (independent financial operation, with settlement transactions increased tenfold and other business functions multiplied); investment efficiency and the growth rate of

labor productivity have dropped; R&D has been largely blocked; the dependence on imports and licenses has increased; dependence on local political forums has increased; business initiative has declined, and behavior is beginning to resemble the behavior of statist enterprises.

2. **Lost Ground for Self-Management.** Regardless of what the intentions of the ZER were, self-management began to stagnate and then to lose ground. This is manifested above all in the well-known fact that the work collective has been so fettered with regulations and so exposed to the interventions of government and political bodies that it can no longer make a single one of the remaining business decisions independently (pricing, investment projects, distribution of income, choice of suppliers, domestic or foreign, and so on). Meanwhile, the sociologists have studied the loss of ground by self-management, and that quite exactly. Thus Arzenšek has ascertained that over the last decade the power of the director and the administration has increased considerably, while the power of the workers' council and the workers has considerably decreased, that two-thirds of Slovenian workers are not participating in nomination of candidates for self-management bodies and delegations; that half of the workers have interests that differ from the interests of trade union officials, and that in 1980 three-fifths of the workers were no longer members of the trade union.\*

3. **Breakup of the Work Collective as a Result of the Breakup of the Enterprise.** A recent television program showed a wire partition dividing a production shop into two parts in order to separate two OOUR's in the same collective. This happened in the railroad car factory in Kraljevo. When asked why their human relations were so bad, the director responded quite correctly: It is not the people who are to blame, but the legislation. In a way this OOUR with the wire fence around it symbolizes the situation which the ZER has created in the Yugoslav economy, a situation which is just the opposite of the integrative tendencies of authentic self-management. The encapsulation of the OOUR passes into encapsulation of the opstina and the republic, and ends with Yugoslavia's encapsulation as to the rest of the world. We can speak without exaggeration of the feudalization of the Yugoslav economy. And once a work collective has been broken up, there necessarily ensues a conflict of interest, mutual distrust, various rumors and irresponsible acts, and a rapid deterioration of human relations. Petit bourgeois commercialization is put on the throne of self-managing (income-sharing) relations. A large portion of time and energy is spent quarreling and haggling, in litigation and unraveling the tangle of muddled relations, and there is less and less time and energy left for production and organizational innovations, for entering into association to form larger systems and for other business initiatives. Attention is centered not on production but on distribution, not on business initiatives but on loopholes in the law. Efficiency drops off, self-management loses ground, and the cycle starts all over.

We should seek the causes of these extremely undesirable manifestations in the erroneous conception of OOUR-ization. The mistake is very easy to explain.

\* V. Arzenšek, "Self-Management and the Power Structure; Stability of the System of Domination," *REVISTA ZA SOCIOLOGIJU*, No. 1-2, 1981, pp. 3-12.

Two fundamentally different organizational principles, one of which is in effect outside the enterprise, and the other within the enterprise, are applied in the organization of economic processes. The former pertains to the market and competition, which end at the gate of the enterprise. The other had to do with solidarity and cooperation, which are in effect within the enterprise. OUR-ization has brought the market into the enterprise (the OUR's begin to sell to each other), and an attempt was made to transpose solidarity outside the enterprise (obligations in sales transactions are not met, and losses are socialized).

The result was the liquidation of solidarity, the disappearance of responsibility, the breakup of the collective, the wire fence (legal or metal) and general confusion.

#### Critical Explanation

Instead of a direct and frank analysis of the system's defects, we have usually had uncritical explanations which are mistaken in their logic or their content. These explanations can be put in the following three groups:

1. The intentions of the ZPP and other pieces of legislation were good, but everything was not implemented as it should have been. The sole decisive criterion which applies equally to science and to economic policy is practice. If the results are bad, then the nature of the intentions is irrelevant. Aside from that, it is difficult to speak of correct intentions when we are dealing with a fundamentally mistaken conception, as the authors of the intentions might easily have informed themselves by consulting with scientists.

And a mistaken conception, should it be implemented, has to yield bad results.

2. The environment is bad. The OUR cannot function well when the Law on Prices and Law on Planning and Law on Foreign Exchange Transactions are not functioning, when sociopolitical communities are imposing enormous taxes, and so on. In other words, the OUR is only a part of the system, so that when the other parts are not functioning as they should, then this has to be manifested in the poor performance of the OUR. This is undoubtedly so. But it is also true that one of the reasons why the other parts of the system are not functioning well is because the OUR has not come through. This explanation only shifts the focus from the reform of the OUR to reform of the system as a whole.

3. The enterprise is a capitalist creation, and it should therefore be broken up. This explanation is inaccurate on three counts. First of all, the enterprise came being long before formation of the capitalist system. And then industry itself is a capitalist creation, yet it does not follow that industry should be annihilated.\* And finally, if the traditional

\* We might mention as a historical curiosity that this is precisely the conclusion drawn by the Japanese when he was minister of industry in Osaka. In



enterprise is not acceptable, that does not mean that its breakup is an acceptable solution. The additional line of argument to the effect that the enterprise should be broken up in order to achieve direct democracy makes the same amount of sense as the possible (anarchistic) demand that the state be broken up in order to achieve direct democracy. We have seen that the power of big and small bosses has increased instead of direct democracy. Voluntarism in the economy and in society regularly causes effects opposite from those proclaimed.

#### The Conception Being Proposed

The enterprise is an independent (political), production (technological and organizational), and economic (economic entity) creation. Except in quite small enterprises, these three structures do not coincide. The fatal defect of the OUR conception is the implicit assumption that these three structures coincide.

1. Self-management, if it is to have its full meaning, requires relatively small groups. In that sense the average enterprise is too large a unit, and it therefore should be disassembled into smaller units. The development of work units or economic units, then, which occurred at one time, had the right orientation. The economic unit is defined as a rounded-off technological entity (usually a plant or administrative department) whose activity can be monitored in the accounting system, and whose work force is sufficiently small as to afford direct democracy. However, no economic unit is sufficiently small as to fully utilize the potential of self-management. It has to be organizationally dismembered into work groups (usually shifts or functional parts of the plant) which have autonomy in organizing the work process. These autonomous work groups in our context have been altogether neglected (and that is one of the results of the "direct democracy" of the OUR),\* while in the Scandinavian countries, for example, they are rather well developed and have been the subject of numerous studies and trade union efforts.

Above the level of the economic unit self-management takes place through delegates.

2. The enterprise, as the principal economic entity, is a juridical person and an autonomous participant in business on the market. The enterprise can

At the time Cuban industry and exports were based on sugar. She reasoned this way: the sugar industry was built by the capitalists, consequently it is a capitalist industry even though it is nationalized, so that socialist Cuba should not develop it. This resulted in the Cuban economy's stagnation for a number of years.

\* For the same reason departments numbering more than 30 members cannot be formed as basic self-managing units in my division of the university. Instead of that delegates in the system of "direct democracy" represent a collective numbering more than 200 people. Anything, so long as there is the will!

also be defined in terms of the functions which it performs. These are the productive, R&D, purchasing, sales, financial and personnel functions.

3. Segments of the enterprise which have become operationally independent. When production is diversified (conglomerates) and geographically dispersed, and in general when an enterprise passes a certain size in its development, the need arises for the various parts (factories, major operations, commercial and transport segments, and so on) to be given a certain operational independence. This organizational problem has been much studied abroad, especially from the standpoint of income accounting and management, but there has been no sign that this research and the practical results have been used in our country. Operational independence usually embraces the productive function, to some extent the sales function (without marketing), and in part the financial and personnel functions. R&D, investment, purchasing, marketing and foreign trade are done at the level of the enterprise. The OOR's could probably be transformed into segments of the enterprise with operational independence.

4. Association of enterprises. Just as the enterprise is the organizational pivot around which organizational forms take shape at the lower and higher levels, so aside from the formation of operationally independent segments there also exists the possibility of forming an association above the level of the enterprise in order to create larger systems. This kind of association has a very diverse morphology, it does not come down solely to the SOEP (complex organization of associated labor), and requires a separate study. It has to do with joint investment undertakings, joint efforts on the foreign market, joint R&D, a joint network of outlets, the pooling of labor, capital and technology with foreign trading partners, systems of industrial cooperation, large systems imposed by a natural monopoly (the railroads, the PTT [postal, telegraph and telephone service] and electric power), and so on.

#### Concluding Considerations

The OOR, so that it might be able to function at all, has outgrown the limits of direct democracy. It is, then, too large a unit for self-management. At the same time, it is too small a unit to perform the function of an economic entity. The defects of the OOR are eliminated by delimitation of the self-management, operational and economic structures and by establishing the enterprise as the organizational pivot, but this does not solve all the problems by any means. At this point we will refer to three which require special solution.

1. Bureaucratization has inaugurated a formalistic model of self-management--with consensus, voting procedures, numerous normative acts, endless handling over of matters and reports (usually imposed), with numerous imposed structures (SOP's [self-managing community of interest]), and various groupings for reconciliation of views and interests), which is fertile soil for manipulation of every kind, which frustrates initiative, discredits self-management, debilitates the work collective and makes it passive, liquidates responsibility and leads toward statist behavior. This model should be replaced by authentic self-management with decentralization of power, involvement of every

individual, reintegration of the work collective--all the way to the economy as a whole--reaffirmation of self-management as a social organization that is fair and efficient and within which, by reestablishment of business autonomy, the work collective would truly make decisions concerning its own destiny. This is a large topic which goes beyond the limits of this article and is one which I have discussed in a systematic way elsewhere.\*

2. Self-management does not simply mean majority decisionmaking, since it might then be transformed into a tyranny of the majority over the minority. It is also necessary to protect the rights of the minority. Within the enterprise this means that every potential economic unit will be truly separate in terms of accounting if its collective so demands, that is, the opportunity would be opened for it to be separate from the enterprise. The latter implies a procedure for establishment of mutual obligations and the manner in which they are to be discharged. This is not only a demand which arises out of democratic rights, but is also a requirement of efficiency in the conduct of economic activity. In an economy based on private ownership the purchase of stocks and bankruptcy are the instruments for transforming inefficient structures. In a self-managing economy only the self-management initiative of the efficient segment of the enterprise can serve as such an instrument. This is another problem requiring specific study, and only an organizational proposal can be offered here. Within economic chambers bureaus for business organization should be created to which enterprises can turn when they encounter organizational difficulties, including the formation of economic units. There might exist in conjunction with these bureaus arbitration councils which would resolve disputes that arise in connection with formation or separation of economic units.

3. Since the enterprise is only a part of the system, its reform can succeed only in the framework of an integral reform of the system. This does not imply amending the constitution, which leaves sufficient room for reforms, but it does imply an amendment of the laws embodying the system. However, many corrections can be made at once, without waiting for the reform as a whole. As a matter of fact, this gradual procedure is indeed desirable, since it affords the possibility of necessary adaptations instead of the organizational upheavals which occurred in formation of the OER's. Consequently, the reform ought to be conceived as a reintegration of the OER's within the enterprise and as a self-management restructuring of the enterprise.

Since I have been a member of the party throughout my entire intellectual life, following the economic analysis, let me be permitted in conclusion a sociopolitical observation in the form of several questions. The first question: Were the future adverse consequences known even when OER-ization was being introduced? Or did this first have to be experimentally proven by turning the entire Yugoslav economy topsy-turvy? Answer: They were known. Second question: Why, then, has the system been retained so long, and why has there been no sort of criticism in public? Have our scientists, who are

\* B. Horvat, "Politička ekonomija socijalizma" [The Political Economy of Socialism], Zagreb, Globus, 1983, especially Chap. 8.

always chasing after creative practice, failed once again, as always in the past? Instead of a reply I will refer to a TV news broadcast in February in which Milan Popovic was shown, before a Yugoslav audience numbering in the many millions, at the moment when in delivering his introductory address in the Ideological Commission of the LCY Central Committee, he summarily proclaimed those who subject OGP-ization to criticism to be enemies; something, that is, in the same rank as the Estashi, those who sided with the Cominform and the Chetniks.

I am fully aware, then, of the risk I expose myself to in publishing this article. It is for that reason that I must also put a third question: If those who are seeking a way out of the present crisis by criticizing the mistakes are to be regarded as enemies, then by the laws of logic those who are preventing criticism and those who cast us into this crisis are to be taken as friends? The logic is flawless, but the use of words is still a bit strange and requires special analysis, this time from the standpoint of social linguistics. This is a new scholarly discipline which is coming into ever greater use in our country. But I leave that analysis for another occasion.

At the moment hostile activity in the sense above is taking place at various points in our country: at the symposium of the journal EKSPERIMENTA, in meetings of the federal councils, economic and legal--and elsewhere. If it might be taken a bit in my favor, I became involved in this hostile activity by profession [possibly "by invitation"]. For that reason, and also in view of my unsuccessful public efforts over several years to prevent the crisis, I at least count on the title "Distinguished Enemy of the SFRY."

DDV

DDV: 800/66

## ENTERPRISE ARSON CASE IMPLICATES SUP MEMBERS

Belgrade BORBA in Serbo-Croatian 27 Sep 83 p 2

[Article by V. Mandic]

[Text] The director of the Gradevinarstvo basic organization of associated labor from Olovo and a worker at the ZOIIL [expansion unknown] of Sarajevo have collected enormous amounts for fire damages and flooding, and by these and other machinations they have been aided by many people, including some workers of the Secretariat of Internal Affairs.

The constantly increasing attacks on public property, including malversation, corruption, collusion between the powerful and the less powerful but still influential who attain their influence on the basis of enormous material wealth--these vices have taken such dimensions that the struggle against lawbreakers has become extremely difficult. There are simply growing numbers of violators, and among them there are frequently responsible and influential people. The ways they attempt to steal from the public till have become increasingly perfidious. One of the perfidious and calculated thefts of public property has occurred last year and this year in a small town in central Bosnia, Olovo. In Sipad, this Romanija labor organization, or more precisely its Gradevinarstvo, basic organization of associated labor, the director Bystar Stojanovic and his close collaborators and powerful friends from the Sarajevo ZOIIL thought up, it must be admitted, a very clever way to harm the society and enrich themselves.

## Materials for Service

In February 1982, there was a fire at Gradevinarstvo in which one building was destroyed. Damage amounted to 670,000 dinars. It was obvious that the barracks had burned down, but it is hard to say whether by intent or by accident. We know for certain that a claim for 1.67 million dinars was submitted to the insurance company in Sarajevo, and that it was paid. The protocol on the damage was submitted by the ZOIIL official Milan Aleksic, who is incidentally a friend of Director Stojanovic. For this and further services, he received building material worth 400,000 dinars, with which he built himself a summer home. Since this first machination--the Aleksic system--passed unnoticed, Stojanovic began to operate in a more organized manner. After the



fire, a flood was fabricated and damage established at 2.7 million dinars, even though actual damage amounted to but 130,000 (if even that is accurate), for the flood was staged and workers of the basic labor organization even used trucks to haul boards and other building materials around and distribute them along the little stream Krivaje.

Floods and fires were director Stojanovic's specialties, and they brought him to prison along with Aleksic. But other machinations were not foreign to them, or to Stojanovic's helpers, who held leading positions in the basic organization of associated labor, which employs 220 workers. They divided up the building materials however they wished, and paid honoraria and per diem. Exhaustive materials on these activities have been prepared at the Committee on Self-Management Workers' Control, the executive council of the opstina organization of the socialist alliance, and the executive council of the Workers' Council. It shows that during his "reign," the director developed ties with officials of the Secretariat of Internal Affairs in Olovo as well. Thus three militiamen were paid fictitious travel expenses, and militiaman Hamza Idrizovic received building material worth 205,720.70 dinars for work performed in coupling an armature, even though the value of the labor was much less than that. At the same time, no turnover tax was paid on the building material, and the tax would have amounted to 188,000 dinars.

#### Little Use From the Labor Groups

The machinations that took place in this labor organization (and only a few have been mentioned) will finally be judged by the court. The court proceedings indicate, however, the actual results of social action in Olovo.

At the beginning of the year, the opstina committee of the Olovo League of Communists formed a task force to examine the state in the labor organization and attempt to clear up the situation, for talk of corruption had already begun to spread through town.

Not much came from the task force. It is difficult to say why at the moment, but it is a fact that as early as June of this year, Director Stojanovic was able to employ his "party conscience" to convince the communists that he was doing good work and that everything was in the interests of the basic labor organization and its workers. He also asserted that he had been assisted in his machinations by Slavko Zekic, chief of the crushing plant.

The opstina committee was not satisfied with the work of the basic organization of the League of Communists, and so it set up a "comradely council."

But there too, nothing happened, until the Secretariat of Internal Affairs took things into its own hands.

Finally, the question of the responsibility of the communists of the task force and the comradely council comes up, and not only these bodies, for Director Stojanovic is still a member of the League of Communists.

Differentiation in the League of Communists is more necessary for us today than it has ever been previously. For precisely that reason, it would be interesting to hear from the communists at the ZOIL in Sarajevo, the Secretariat of Internal Affairs in Olovo and if necessary, to take joint action to bring everything out into the open, for the list of those who have been mentioned is rather long in the findings of the self-management agencies of the Gradvinarstvo basic organization of associated labor in Olovo.

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## YUGOSLAVIA

### BRIEFS

**EXPERIMENTAL OIL SHALE EXPLOITATION**--The business community for prospecting and exploitation of oil shale and the Energoinvest Work Organization of Belgrade concluded an agreement to construct an experimental plant for exploitation of oil shale and production of oil in Aleksinac. In Serbia, there are 10 billion tons of oil shale deposits in Serbia, 3 billion of which are in Aleksinac area. It is planned that the first oil will be produced in 1987, and that after a 3-year running-in period, regular production would begin in 1990-1992. [Summary] [Belgrade POLITIKA in Serbo-Croatian 20 Oct 83 p 8 AU]

**ELECTRIC POWER SHORTAGE**--Belgrade, 20 Oct--Every day Yugoslavia is short of 10 - 12 million kilowatt hours of electricity. The situation is worst in Croatia, Macedonia, Bosnia-Herzegovina, and Montenegro, where, despite the fact that the thermoelectric powerplants are operating well, and despite the import of electricity from abroad, there are daily power cuts. Yugoslavia now daily buys 5.5 million kilowatt hours of electricity abroad, and also borrows 10 million kilowatt hours daily. The situation is most favorable in Serbia, Kosovo, and Loovenia, primarily due to large borrowing and purchase of electricity abroad, as well as due to good operations of the Kosovo B thermoelectric powerplant and the Krsko nuclear powerplant, which is fully operating. Because of a shortage of heavy oil, powerplants of 900 megawatts are standing idle, powerplants of 350 megawatts are being overhauled, while powerplants of 1,067 megawatts are out of order. [Summary] [Belgrade BORBA in Serbo-Croatian 21 Oct 83 p 12 AU]

**KOSOVO POOR ECONOMIC TRENDS**--Pristina, 27 Oct--At a session of all three chambers of the Kosovo Assembly today it was announced that in the first 9 months of this year the Kosovo industrial production noted an increase of merely 0.6 percent, and that 16 industrial branches noted a fall in production, and 15 branches an increase in production. In the same period, goods worth 8,742,000,000 dinars were exported and goods worth 10,062,000,000 dinars were imported. The overall exports covered 86.9 percent of imports, while imports from the convertible currency area were covered by 4.2 percent of exports. The overall obligations, both in dinars and in foreign exchange, totaled 49 billion dinars at the beginning of September. This sum is equal to the overall social revenue in 1981. In the first 6 months of this year, losses totaled 2.17 billion dinars, and this is 1.7 percent more than last year. [Summary] [Belgrade Borba in Serbo-Croatian 28 Oct 83 p 3 AU]

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**DATE FILMED**

Dec 5, 1983